

# A. APPENDIX

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## Complete experimentation results

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The following appendix shows the complete results of the experimentation subdivided into 2 categories: the optimal hyperparameter analysis and the survey validation results.

### A.1 Hyperparameter optimization results

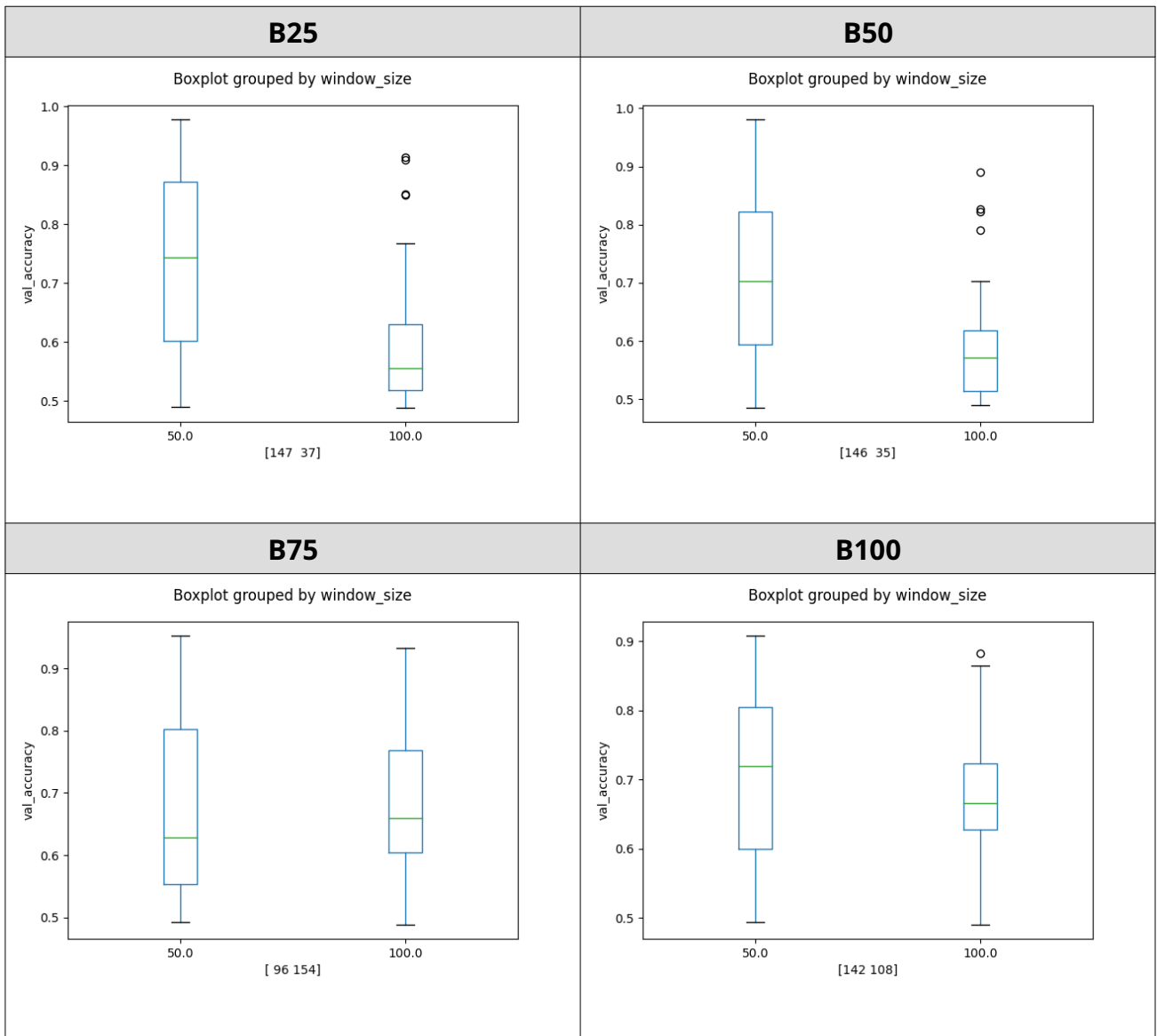
The following appendix section shows the results of the hyperparameter optimization process, collected and summarized into box-plots (excluding *learning\_rate*).

Each subsection collects the results for one hyperparameter, and each page shows the results for one subject and follows this naming: the first letter indicates the subject name and the following numbers indicate the percentage of the full data that was used for the optimization of the hyperparameters.

The numbers displayed between brackets below any box-plot indicate the number of samples that each hyperparameter value was selected.

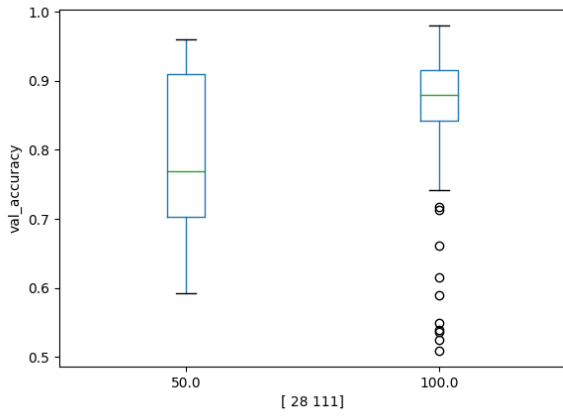
In the case of the *learning\_rate* hyperparameter, the plot is a logarithmic scale scatter-plot.

### A.1.1 *window\_size*

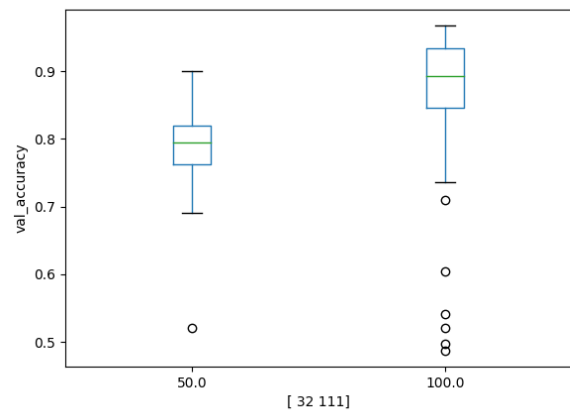


**C25**

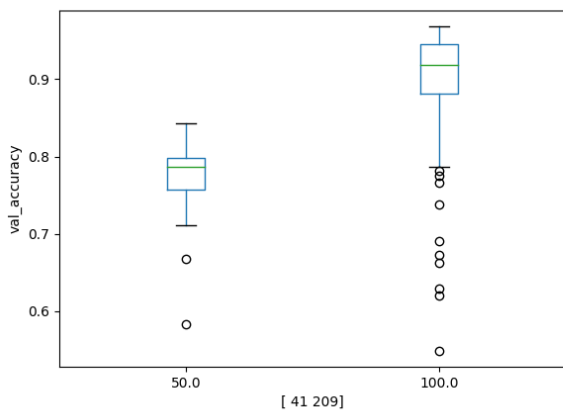
Boxplot grouped by window\_size

**C50**

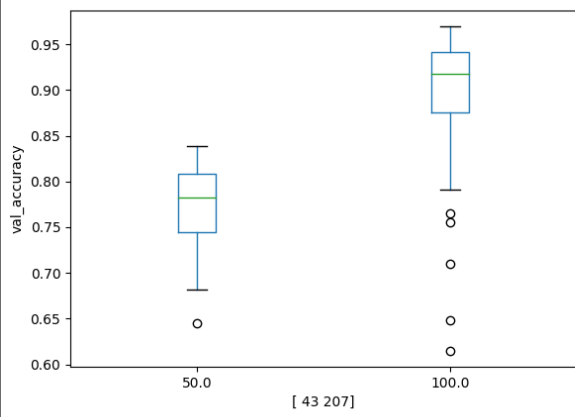
Boxplot grouped by window\_size

**C75**

Boxplot grouped by window\_size

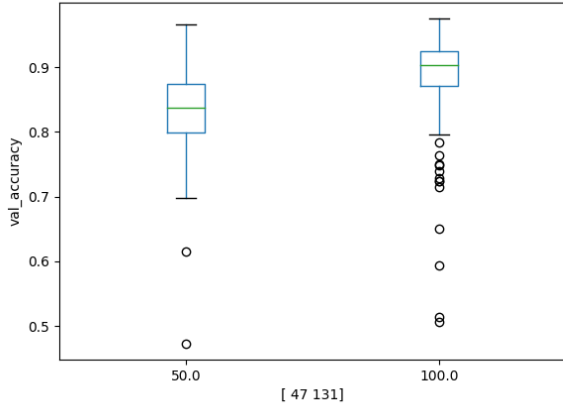
**C100**

Boxplot grouped by window\_size



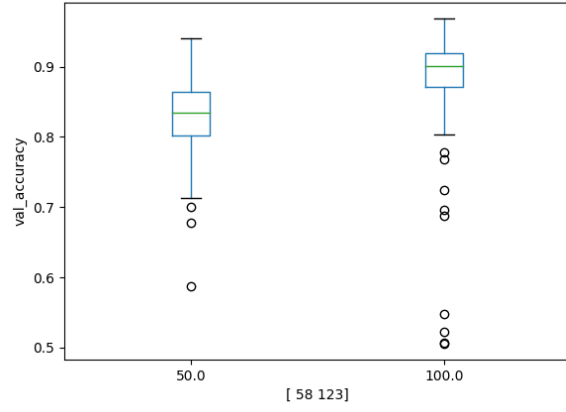
### E25

Boxplot grouped by window\_size



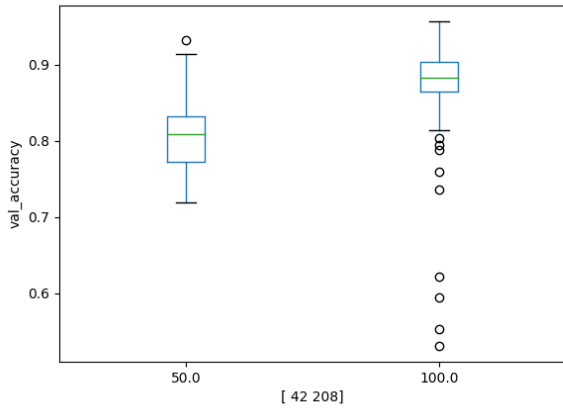
### E50

Boxplot grouped by window\_size



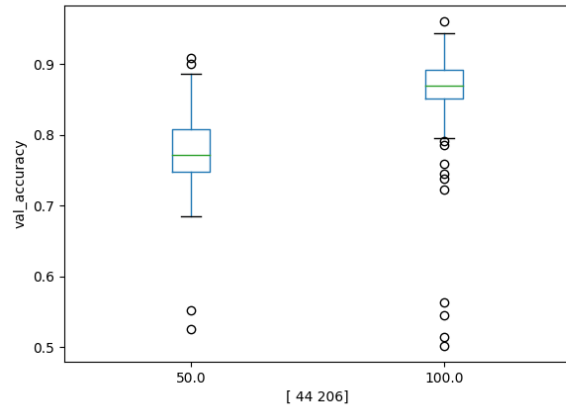
### E75

Boxplot grouped by window\_size



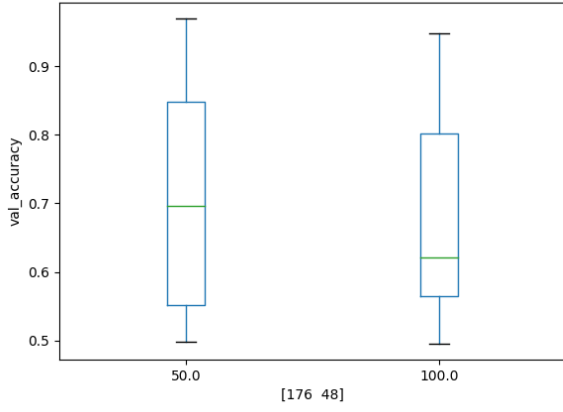
### E100

Boxplot grouped by window\_size

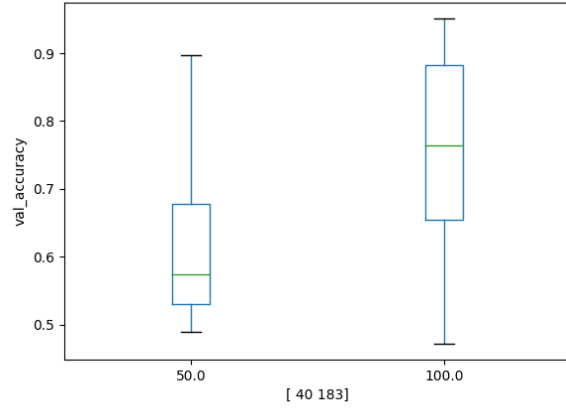


**F25**

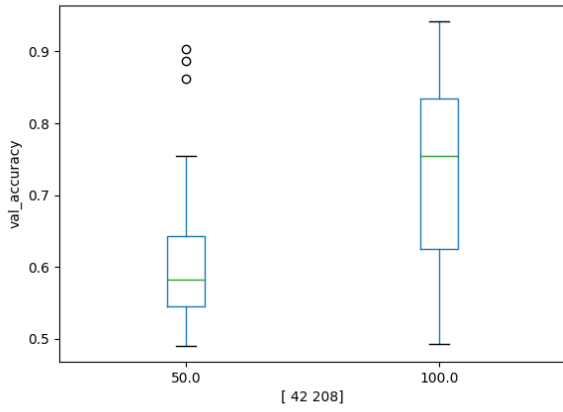
Boxplot grouped by window\_size

**F50**

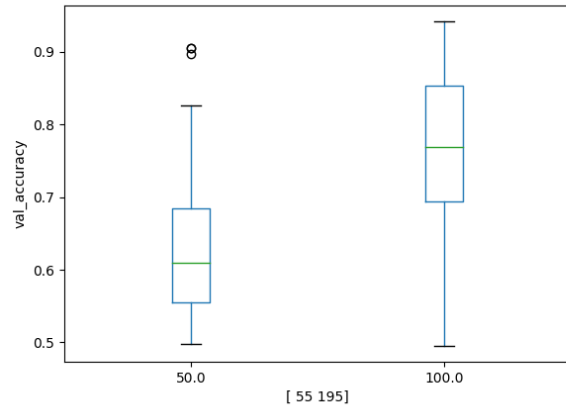
Boxplot grouped by window\_size

**F75**

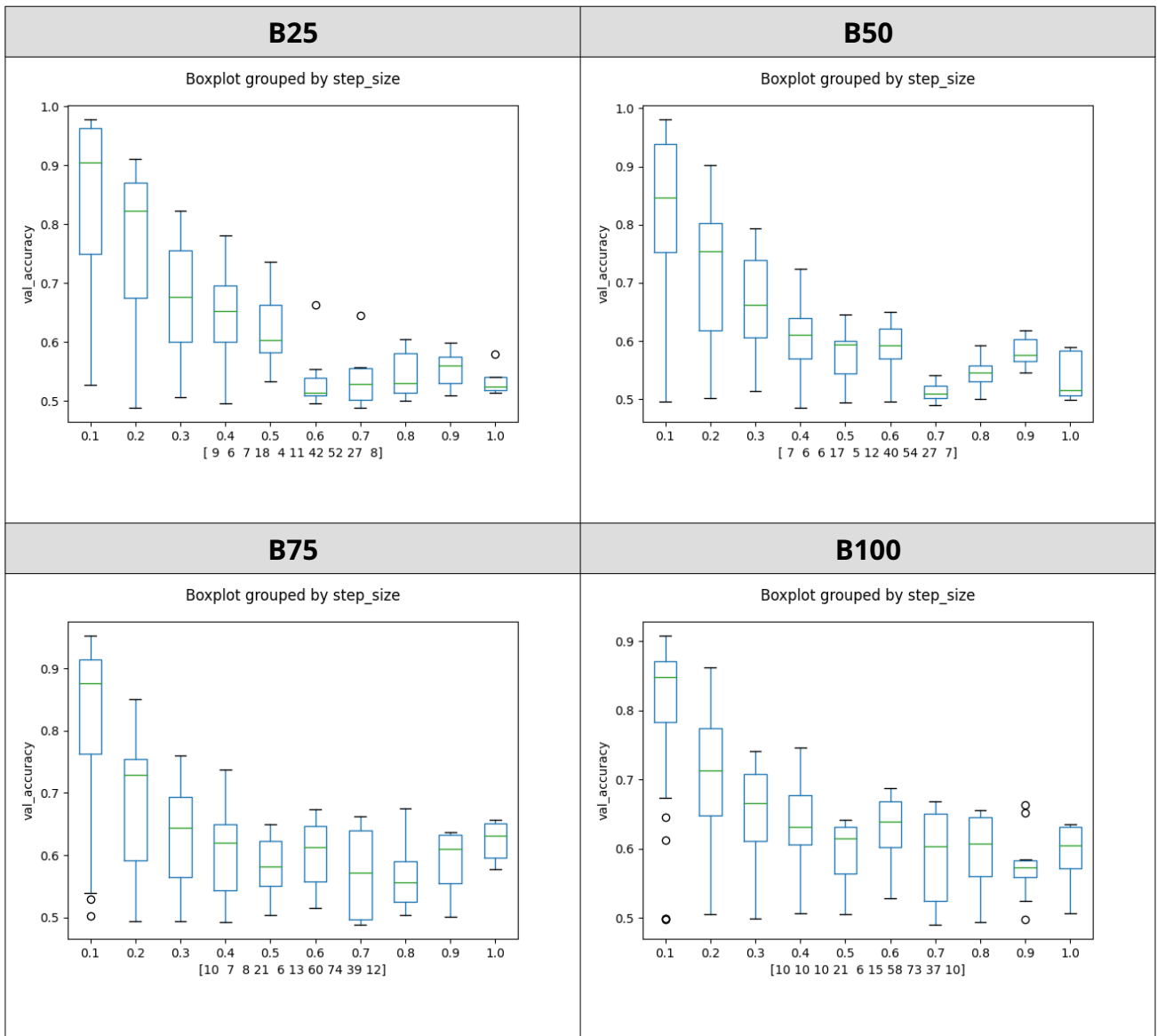
Boxplot grouped by window\_size

**F100**

Boxplot grouped by window\_size

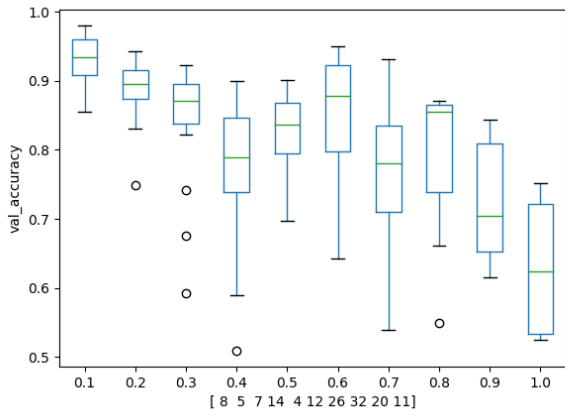


## A.1.2 *step\_size*



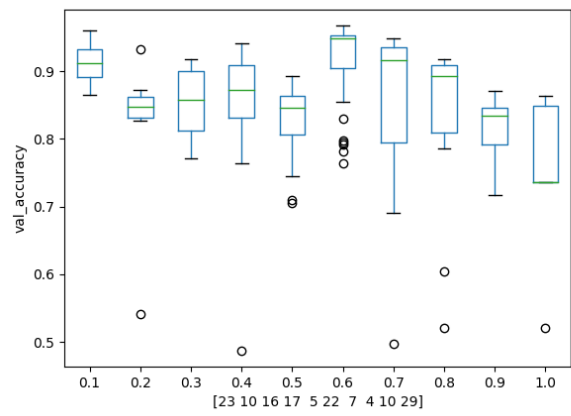
### C25

Boxplot grouped by step\_size



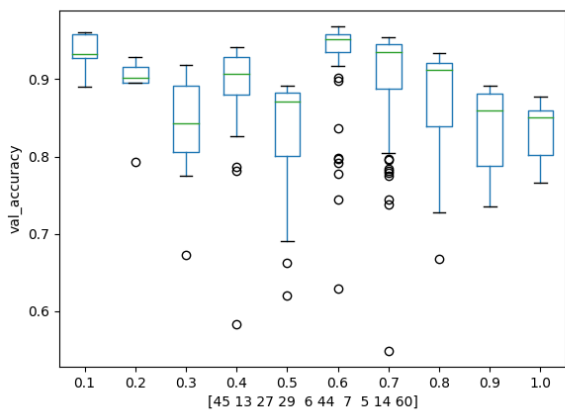
### C50

Boxplot grouped by step\_size



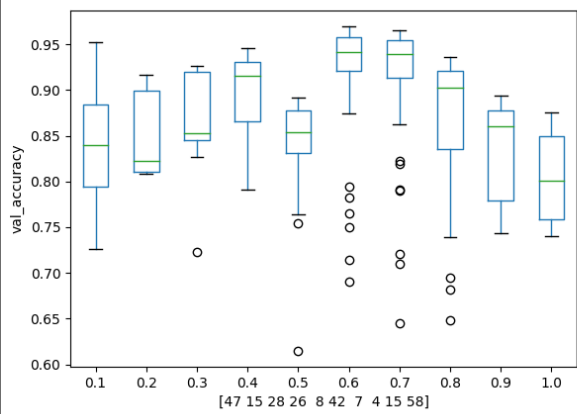
### C75

Boxplot grouped by step\_size



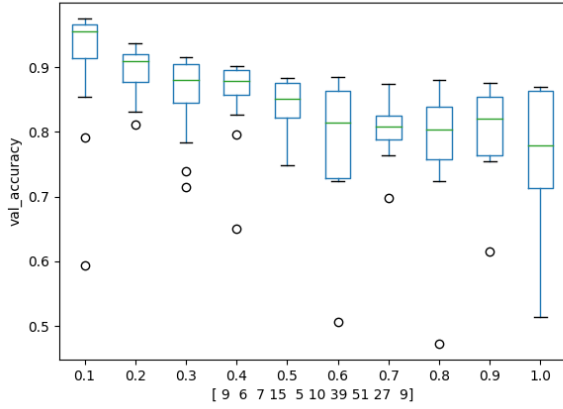
### C100

Boxplot grouped by step\_size



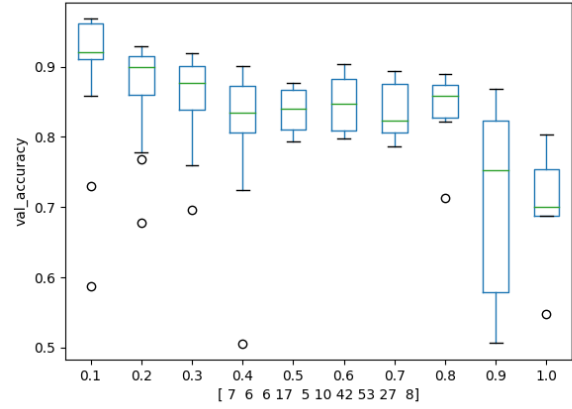
### E25

Boxplot grouped by step\_size



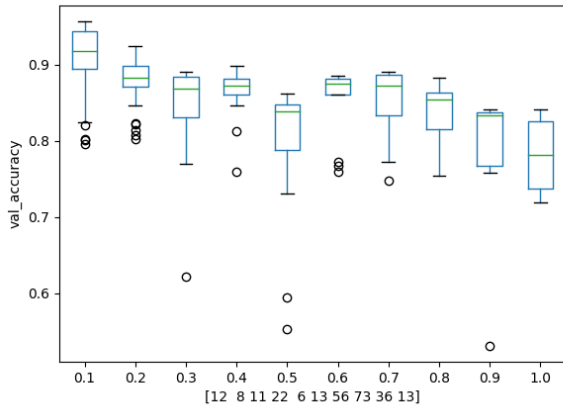
### E50

Boxplot grouped by step\_size



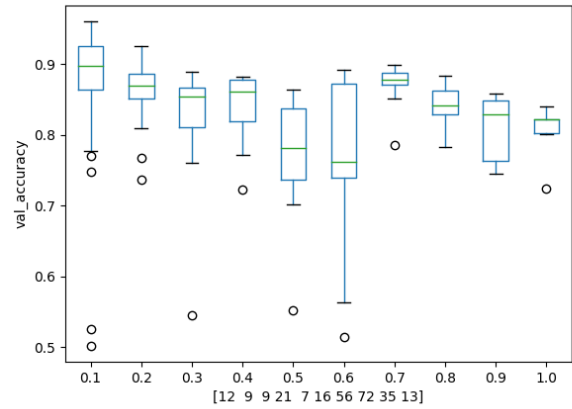
### E75

Boxplot grouped by step\_size



### E100

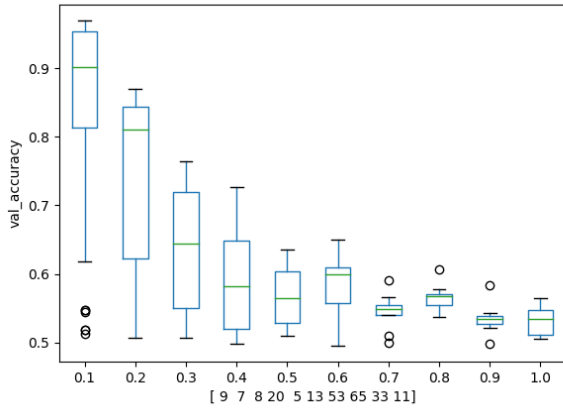
Boxplot grouped by step\_size





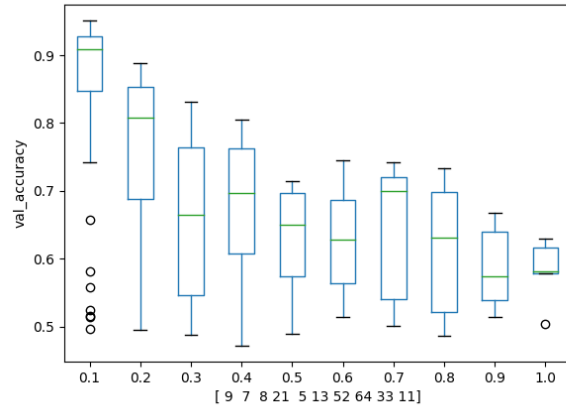
### F25

Boxplot grouped by step\_size



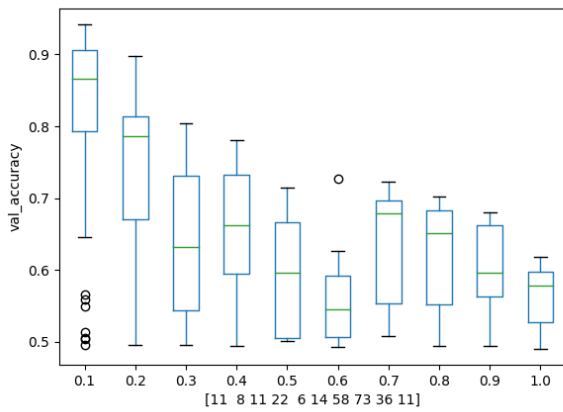
### F50

Boxplot grouped by step\_size



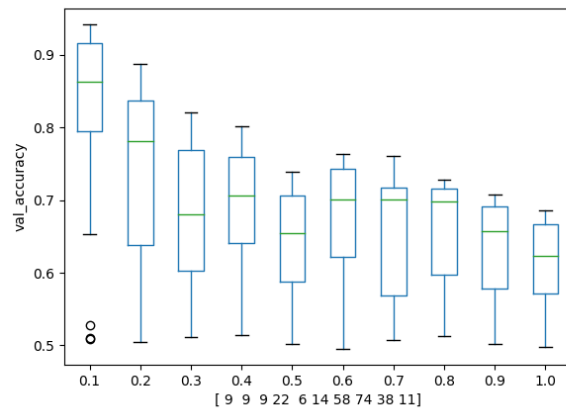
### F75

Boxplot grouped by step\_size

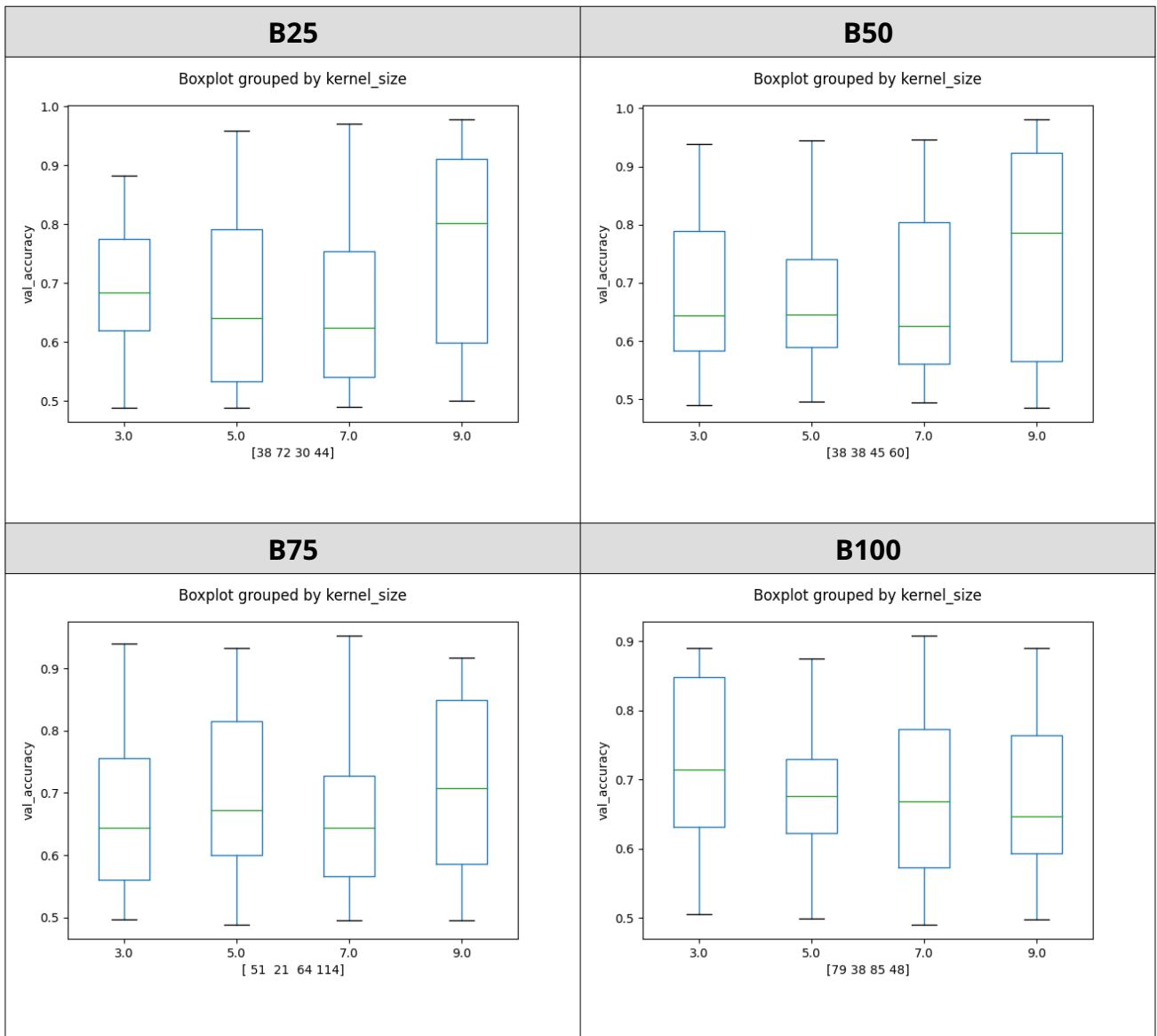


### F100

Boxplot grouped by step\_size

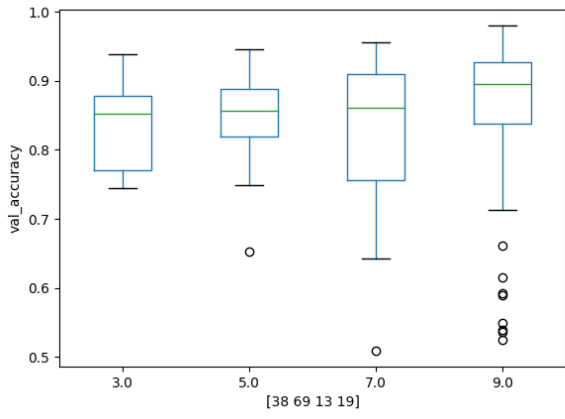


### A.1.3 *kernel\_size*



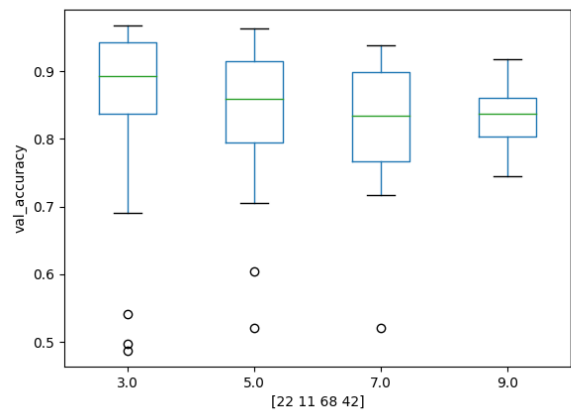
### C25

Boxplot grouped by kernel\_size



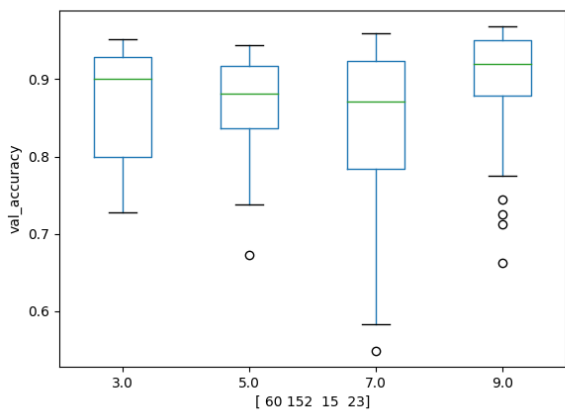
### C50

Boxplot grouped by kernel\_size



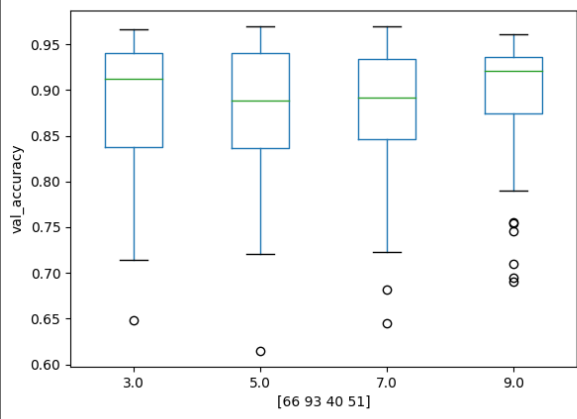
### C75

Boxplot grouped by kernel\_size



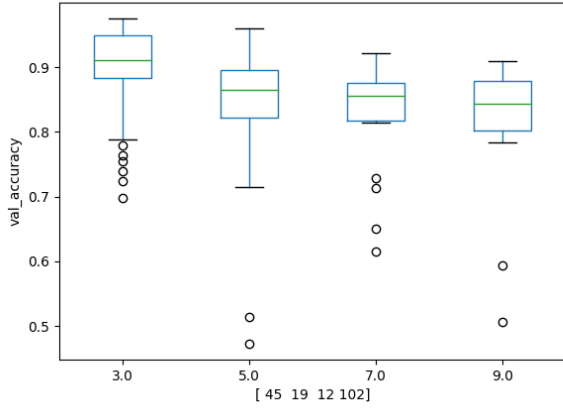
### C100

Boxplot grouped by kernel\_size



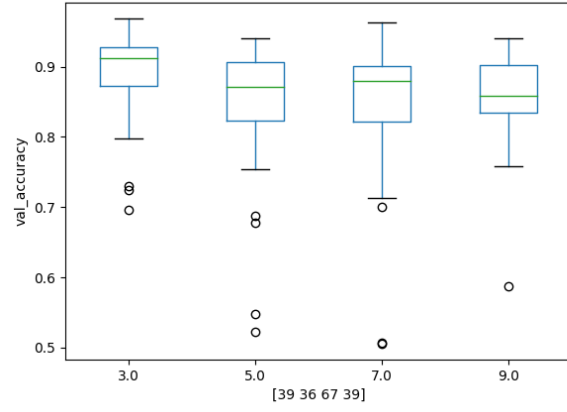
### E25

Boxplot grouped by kernel\_size



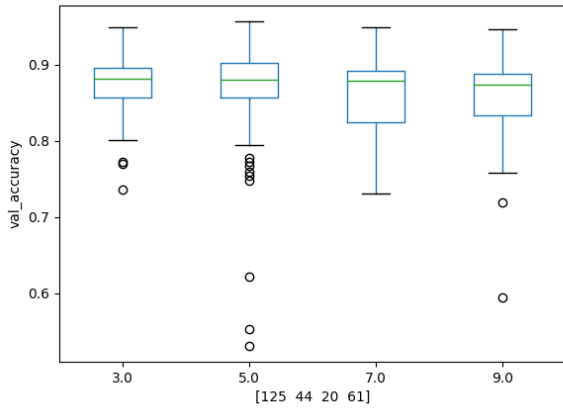
### E50

Boxplot grouped by kernel\_size



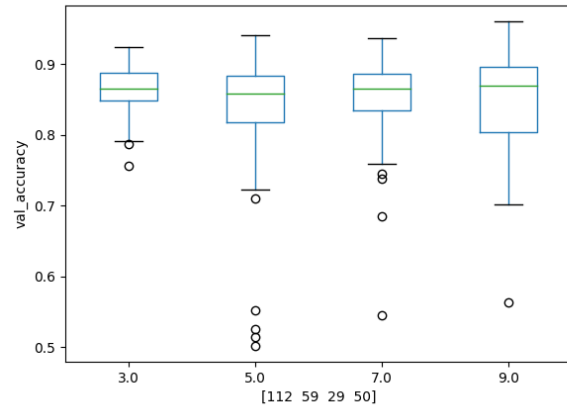
### E75

Boxplot grouped by kernel\_size



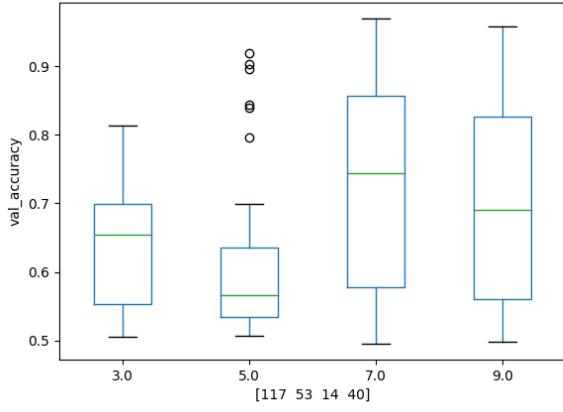
### E100

Boxplot grouped by kernel\_size



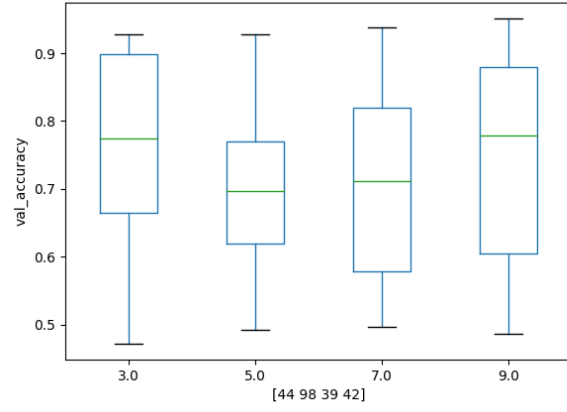
### F25

Boxplot grouped by kernel\_size



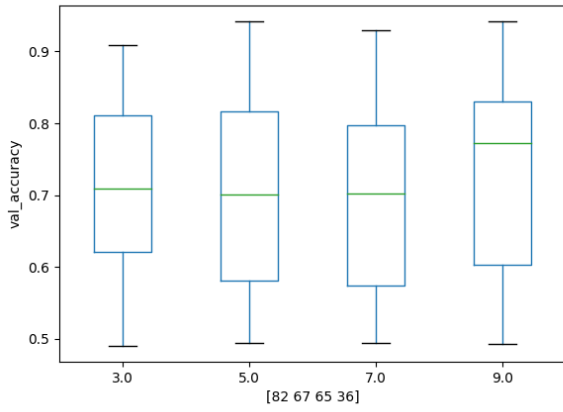
### F50

Boxplot grouped by kernel\_size



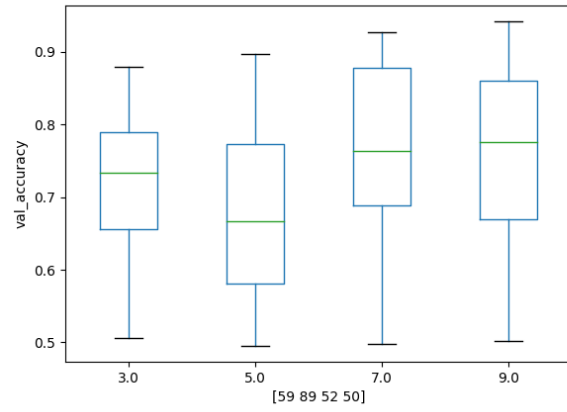
### F75

Boxplot grouped by kernel\_size

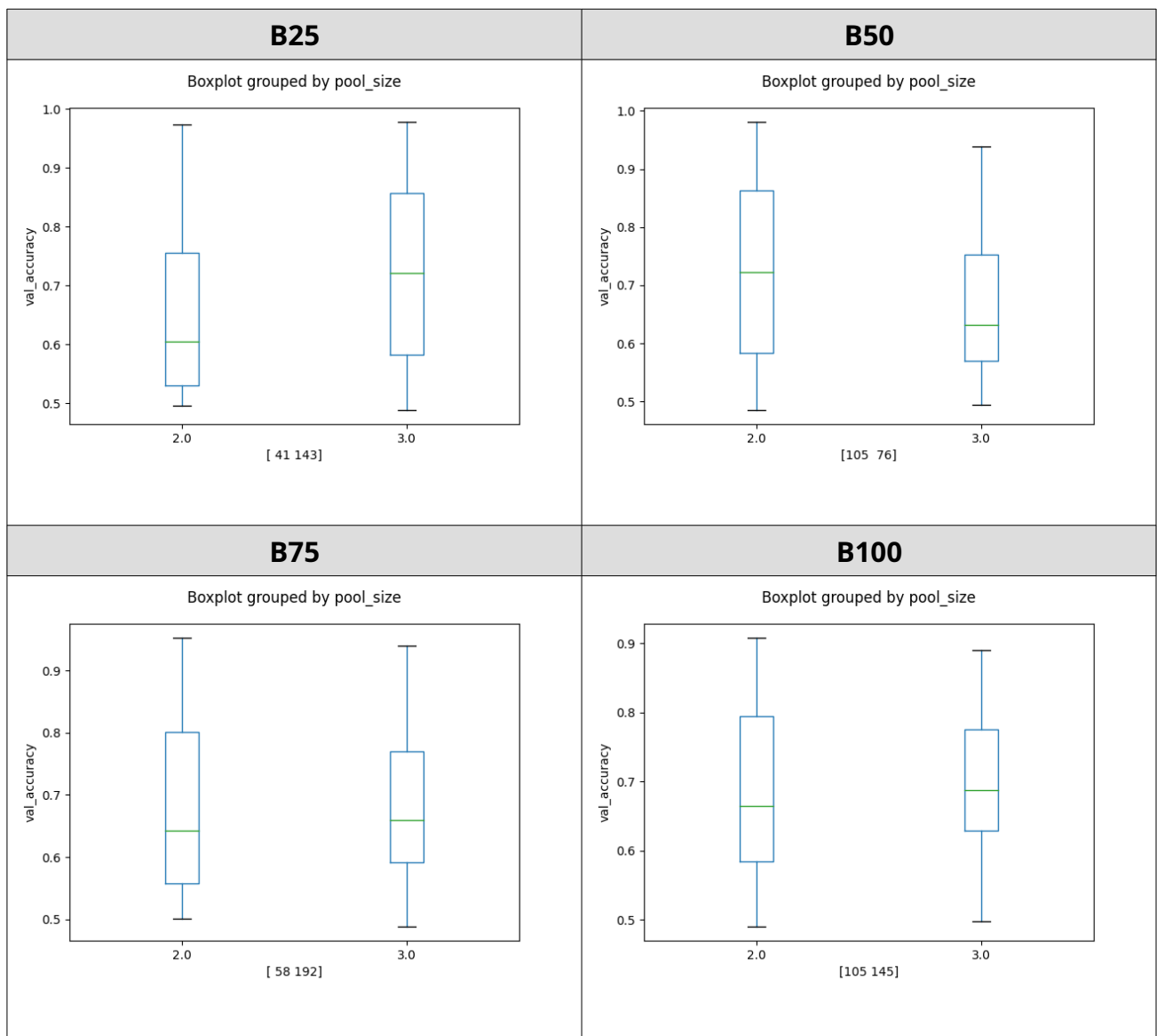


### F100

Boxplot grouped by kernel\_size

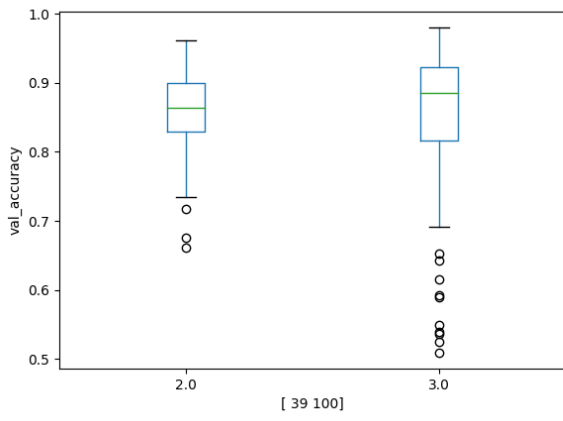


### A.1.4 *pool\_size*

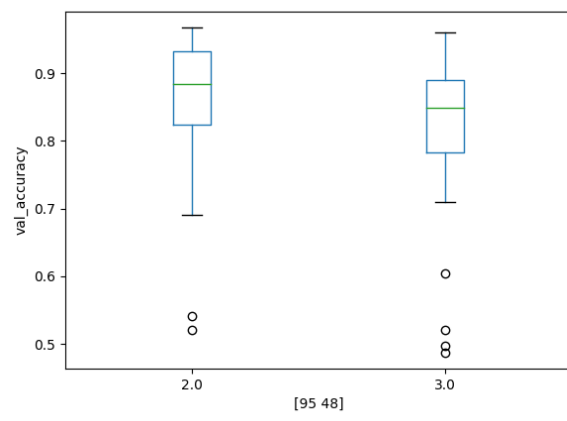


**C25**

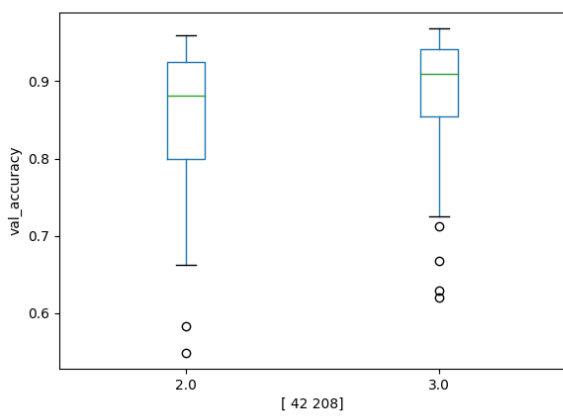
Boxplot grouped by pool\_size

**C50**

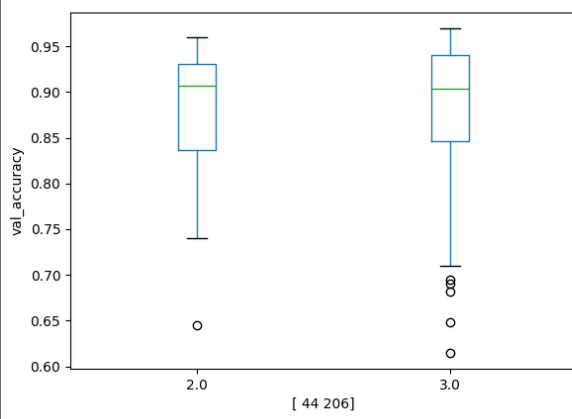
Boxplot grouped by pool\_size

**C75**

Boxplot grouped by pool\_size

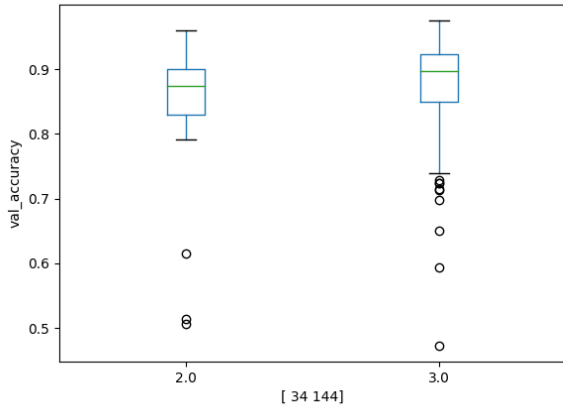
**C100**

Boxplot grouped by pool\_size



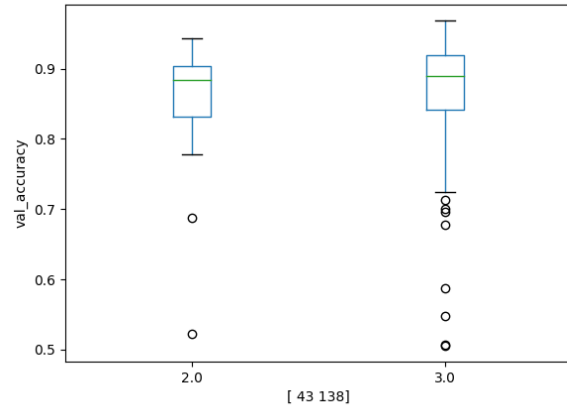
### E25

Boxplot grouped by pool\_size



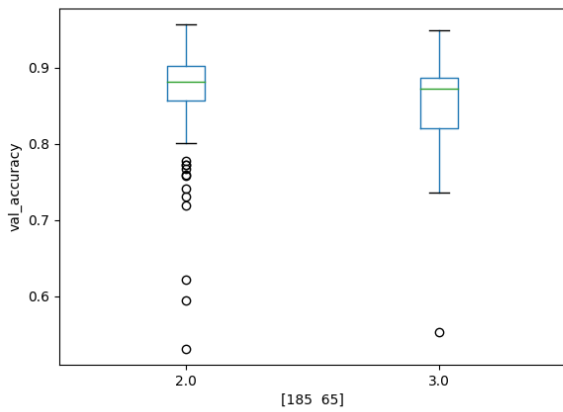
### E50

Boxplot grouped by pool\_size



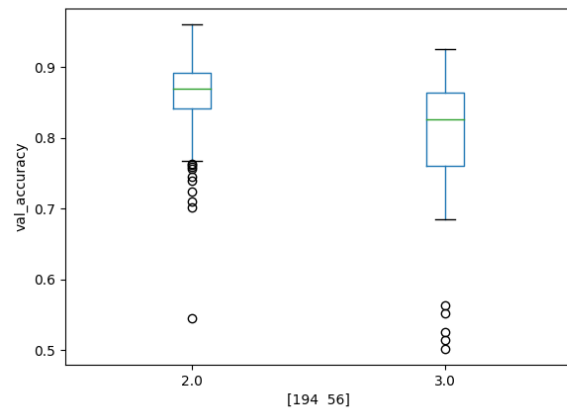
### E75

Boxplot grouped by pool\_size



### E100

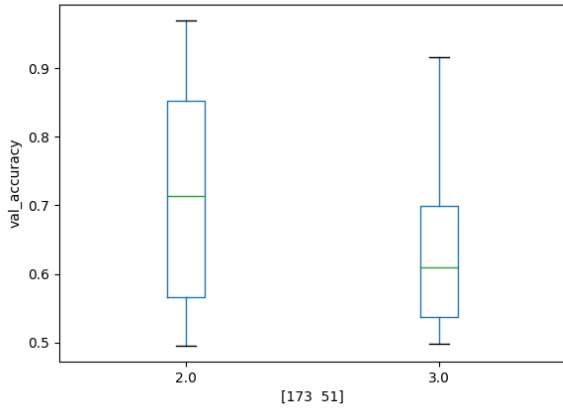
Boxplot grouped by pool\_size



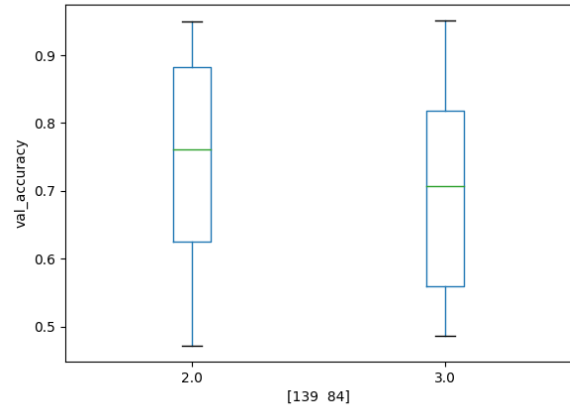


**F25**

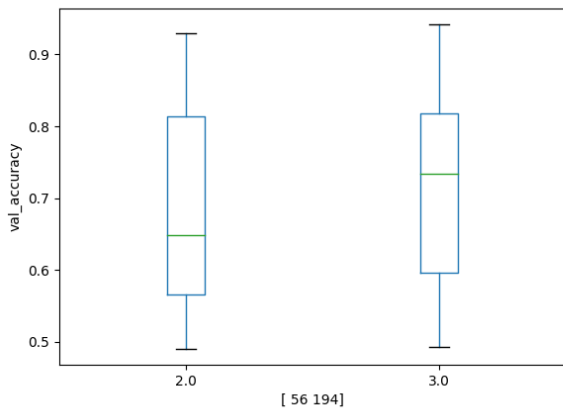
Boxplot grouped by pool\_size

**F50**

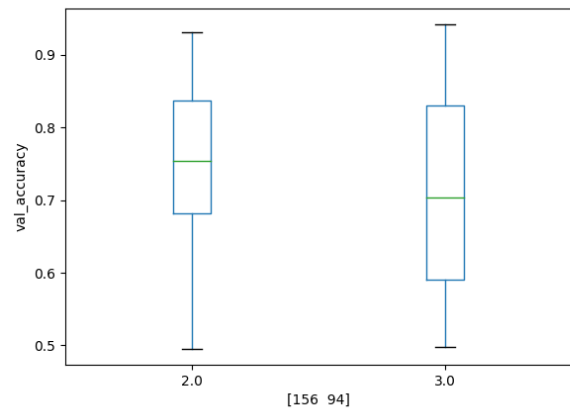
Boxplot grouped by pool\_size

**F75**

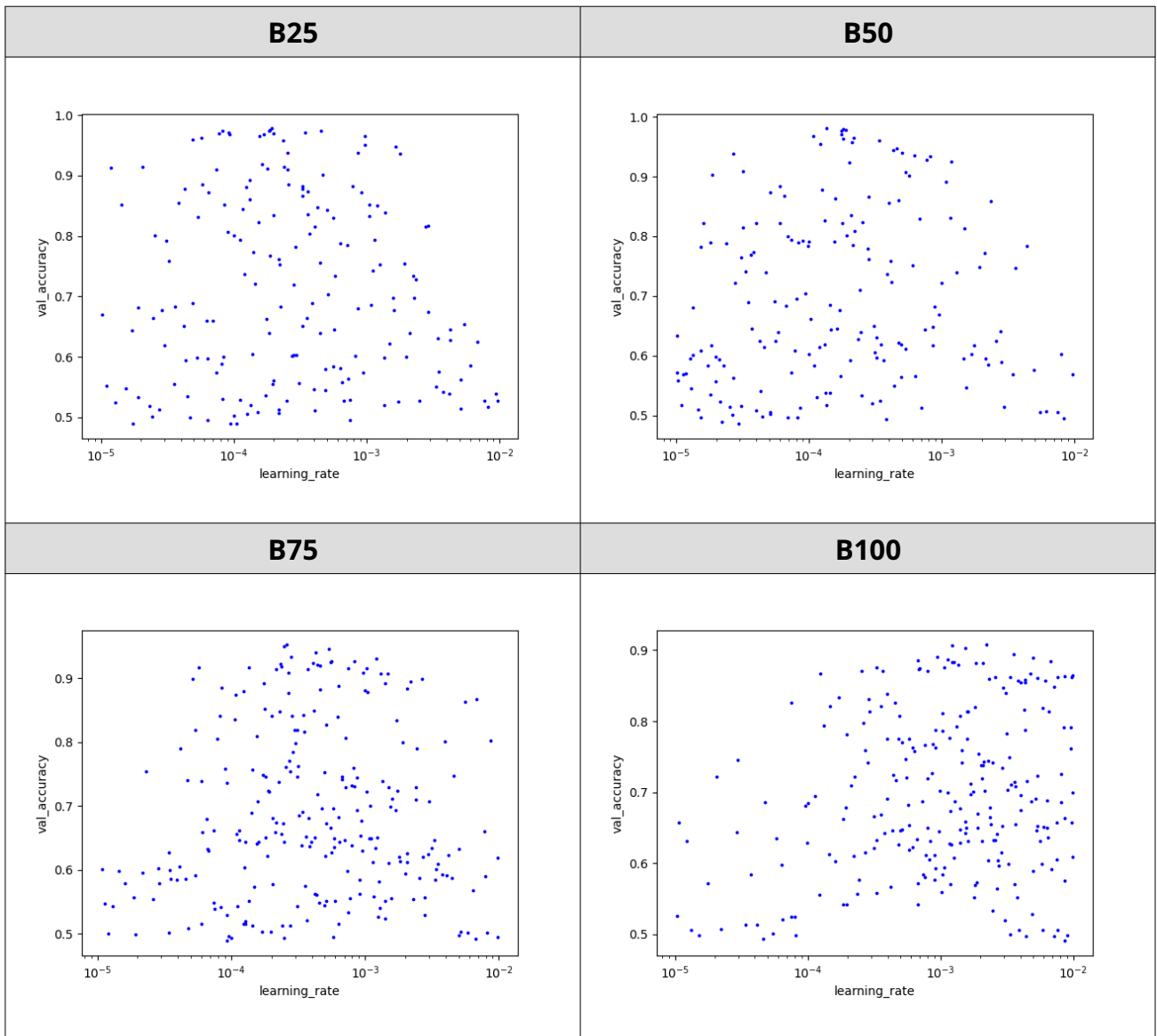
Boxplot grouped by pool\_size

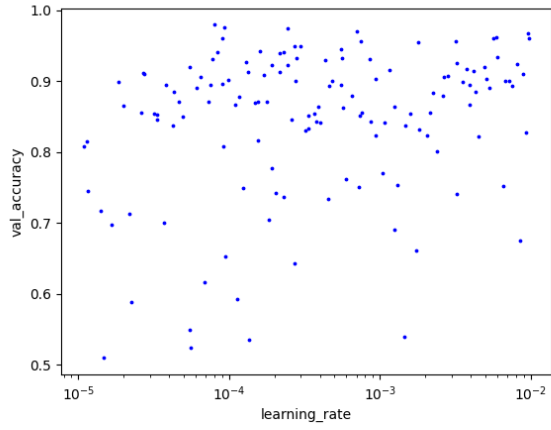
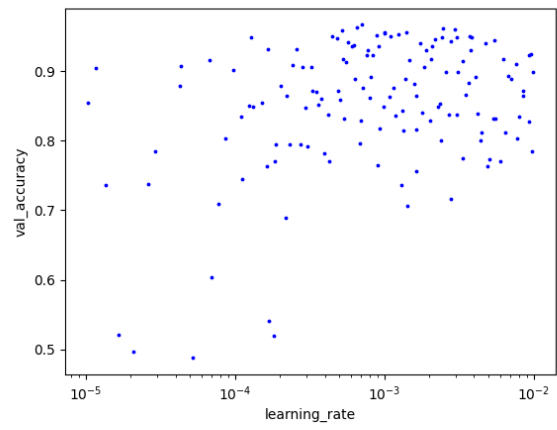
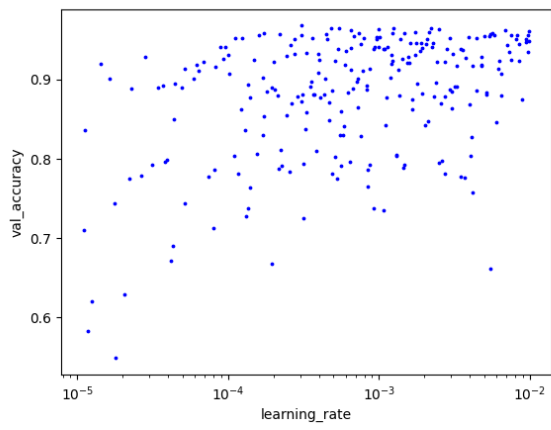
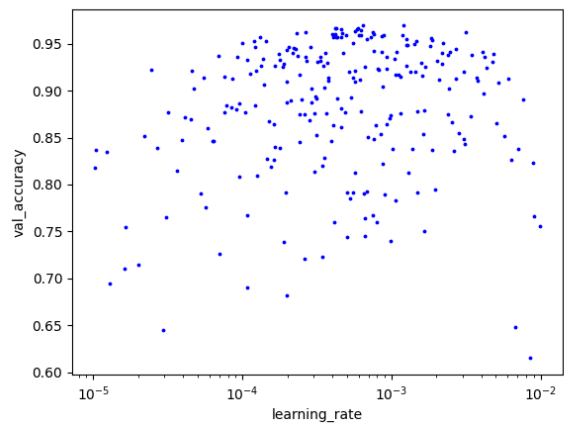
**F100**

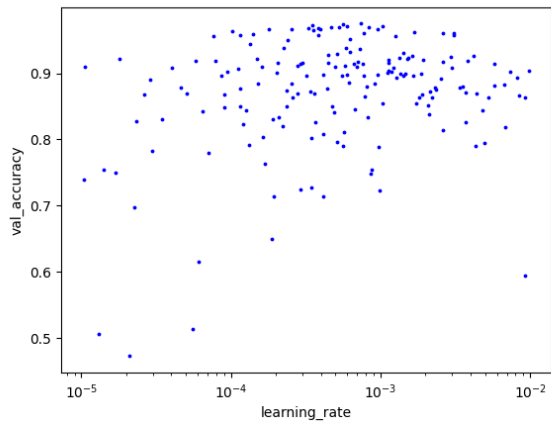
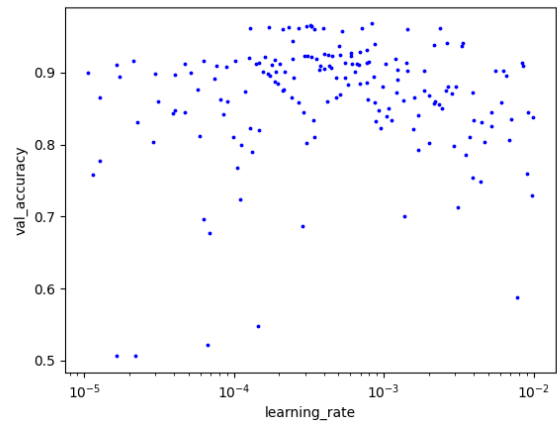
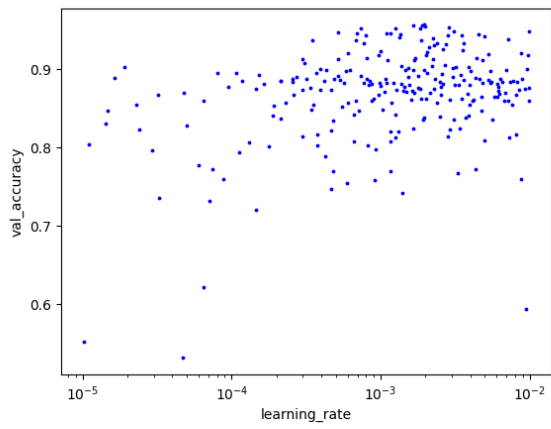
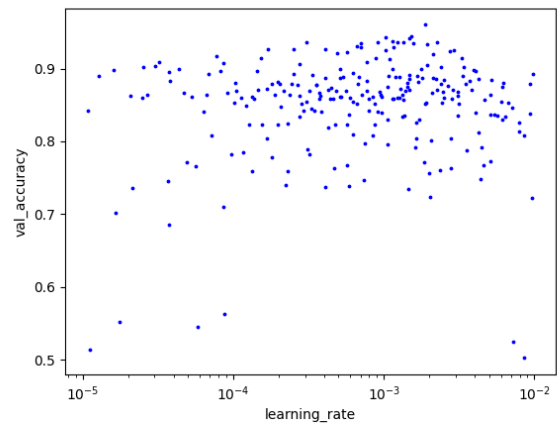
Boxplot grouped by pool\_size

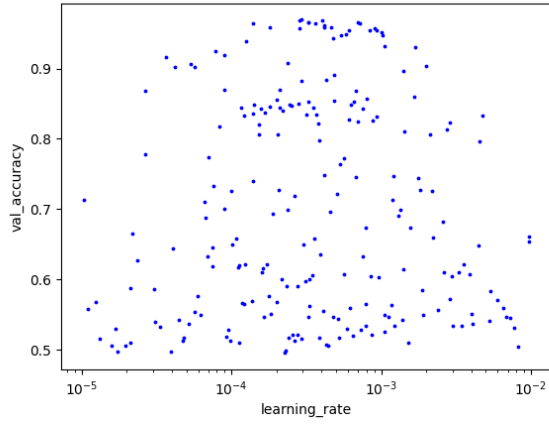
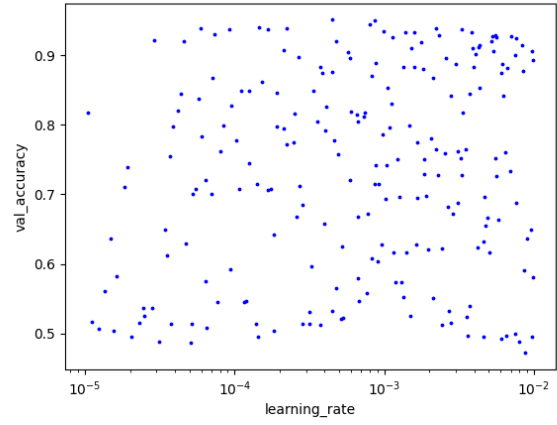
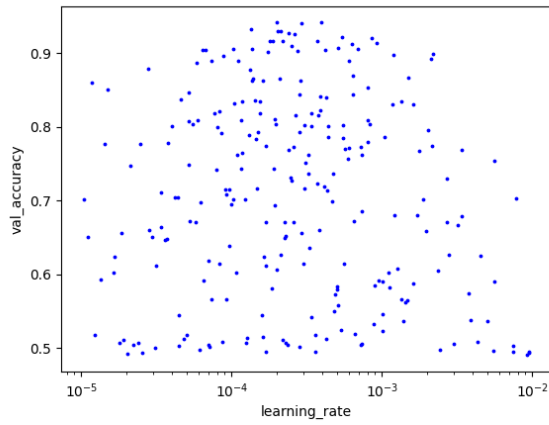
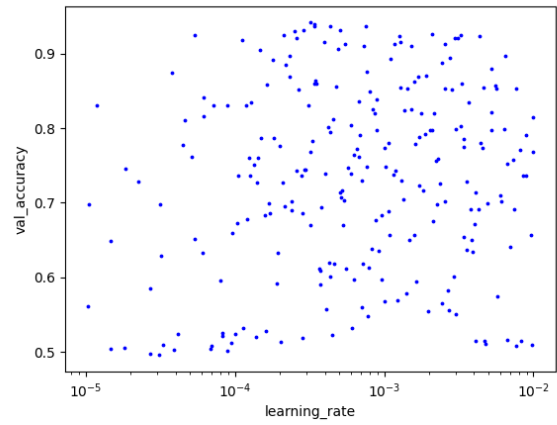


### A.1.5 *learning\_rate*

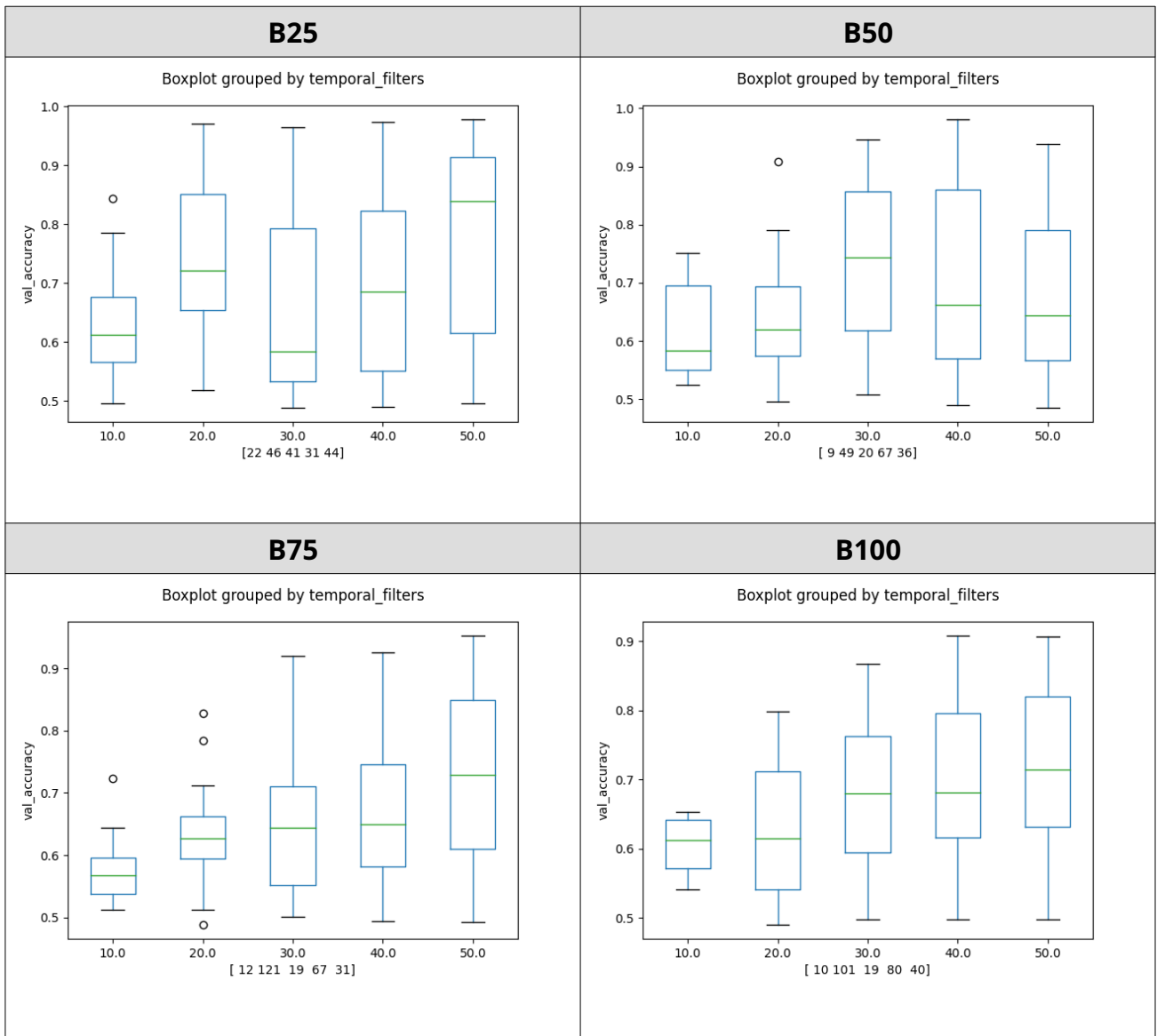


**C25****C50****C75****C100**

**E25****E50****E75****E100**

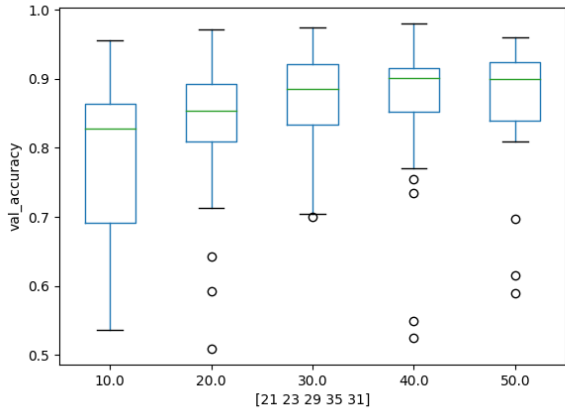
**F25****F50****F75****F100**

## A.1.6 *temporal\_filters*



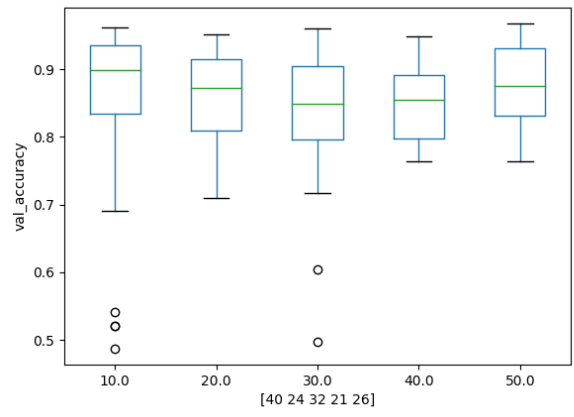
### C25

Boxplot grouped by temporal\_filters



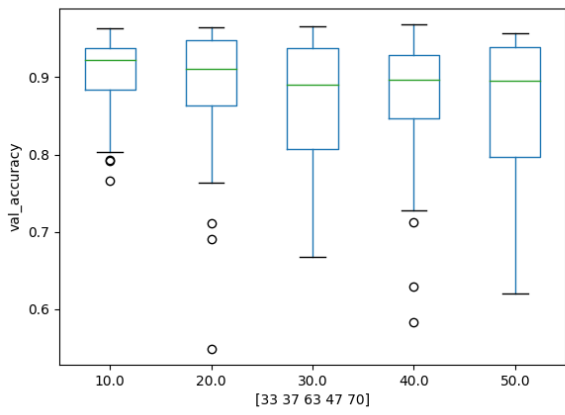
### C50

Boxplot grouped by temporal\_filters



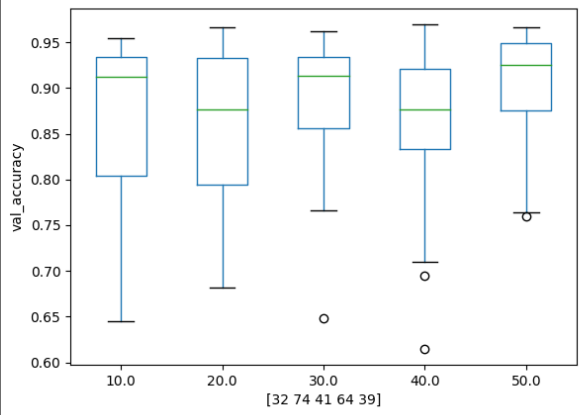
### C75

Boxplot grouped by temporal\_filters



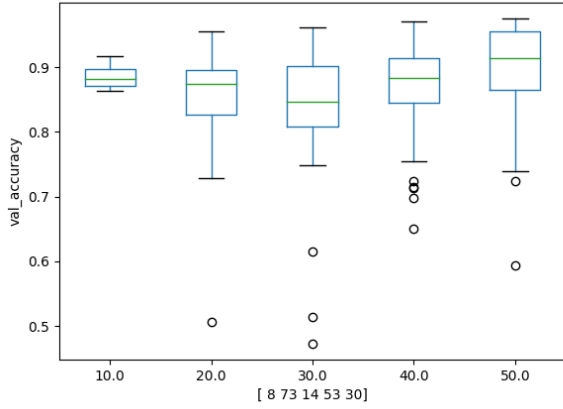
### C100

Boxplot grouped by temporal\_filters



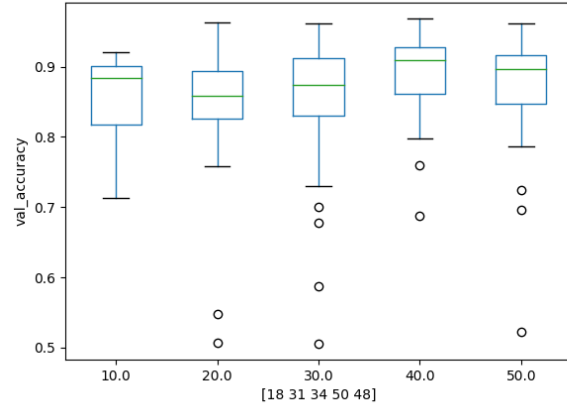
### E25

Boxplot grouped by temporal\_filters



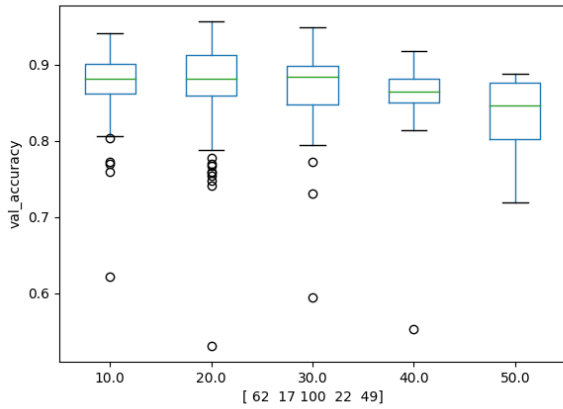
### E50

Boxplot grouped by temporal\_filters



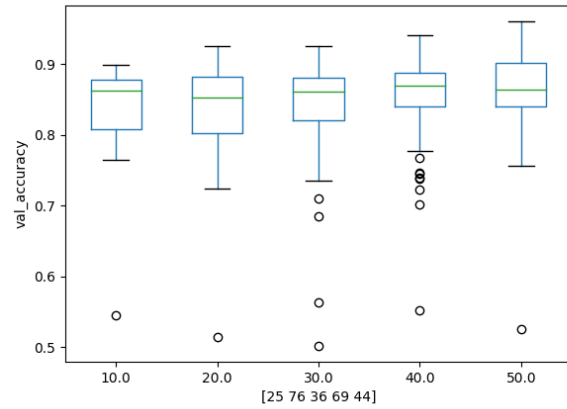
### E75

Boxplot grouped by temporal\_filters



### E100

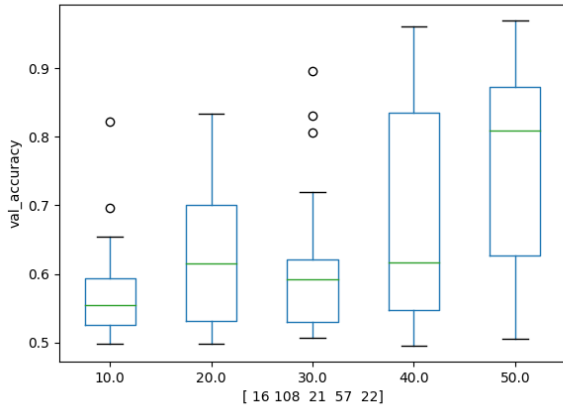
Boxplot grouped by temporal\_filters





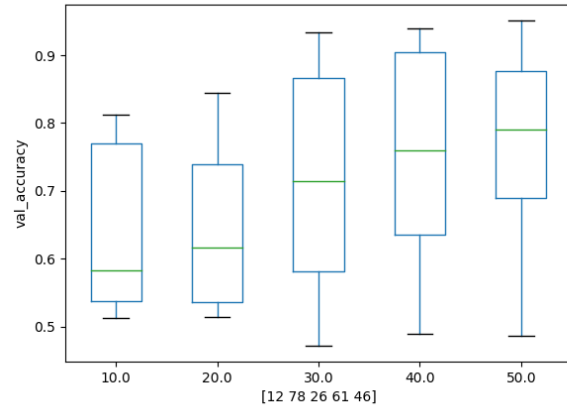
### F25

Boxplot grouped by temporal\_filters



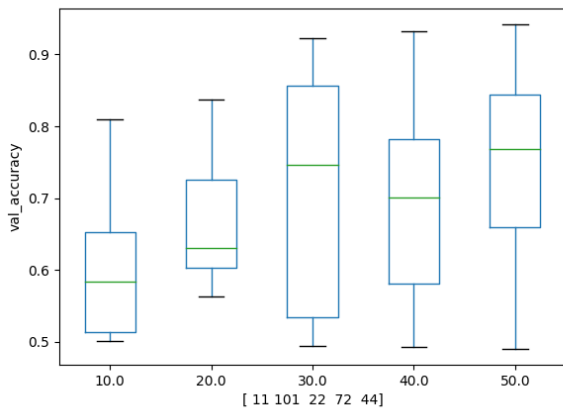
### F50

Boxplot grouped by temporal\_filters



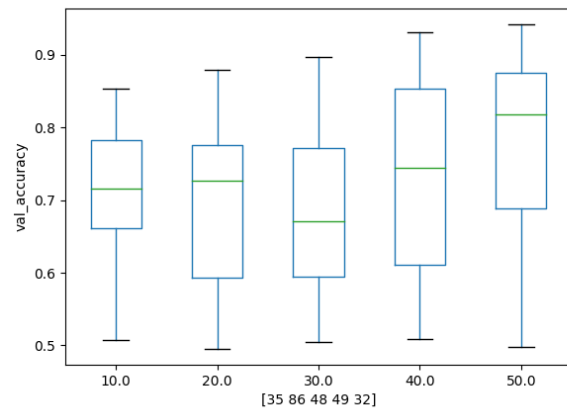
### F75

Boxplot grouped by temporal\_filters

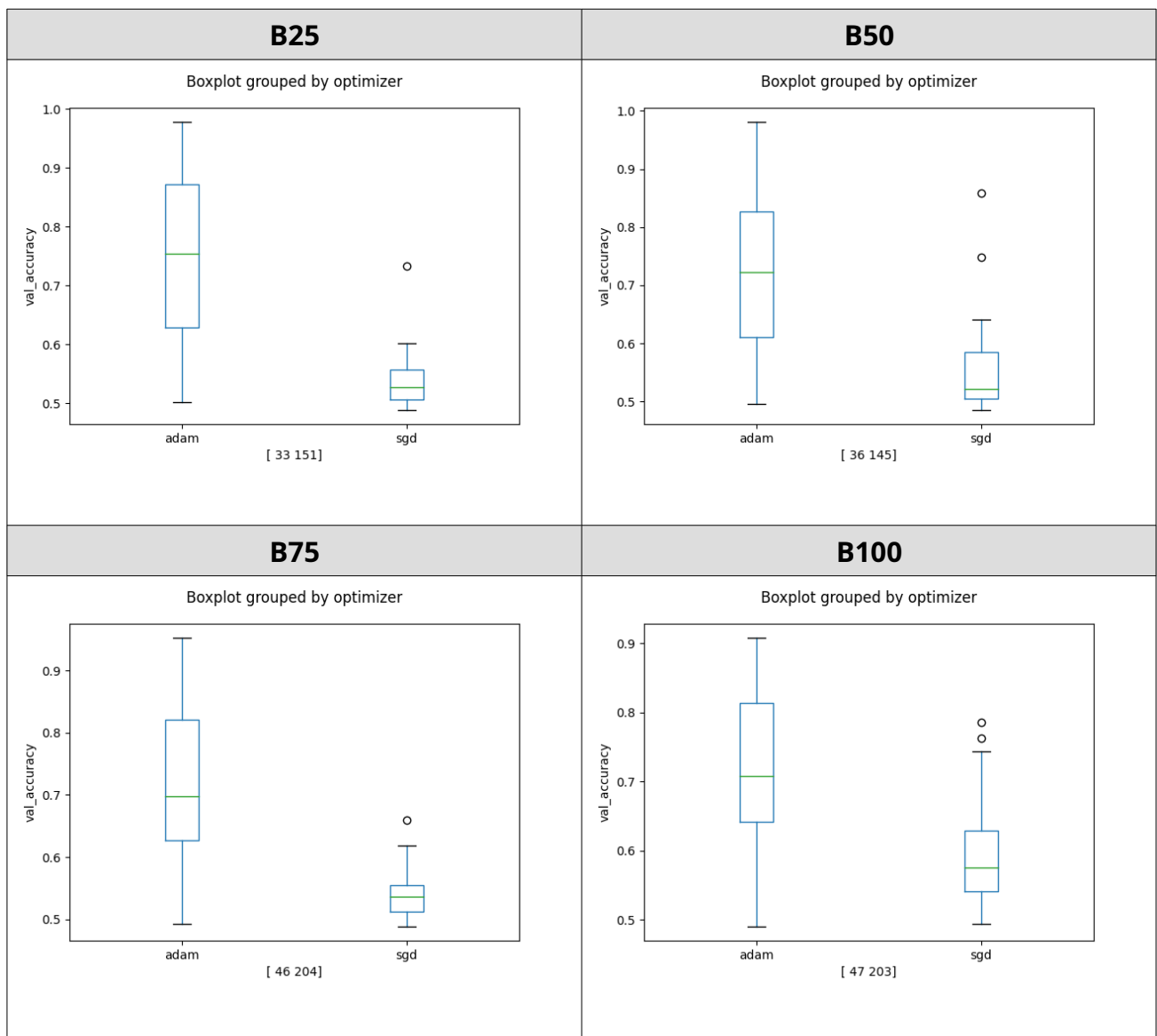


### F100

Boxplot grouped by temporal\_filters

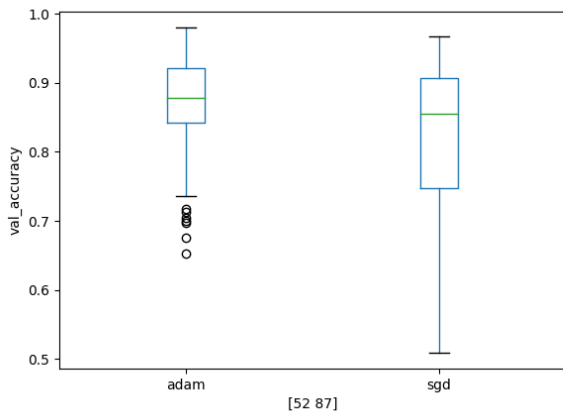


## A.1.7 optimizer

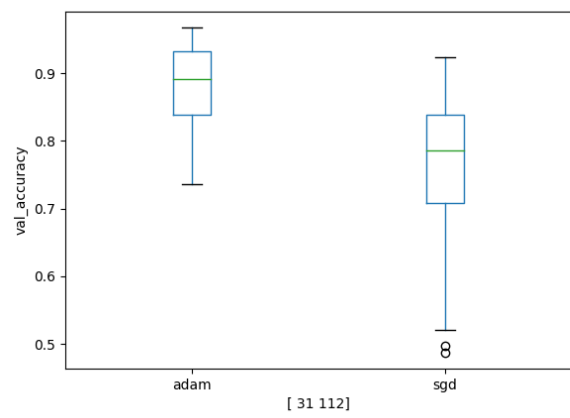


**C25**

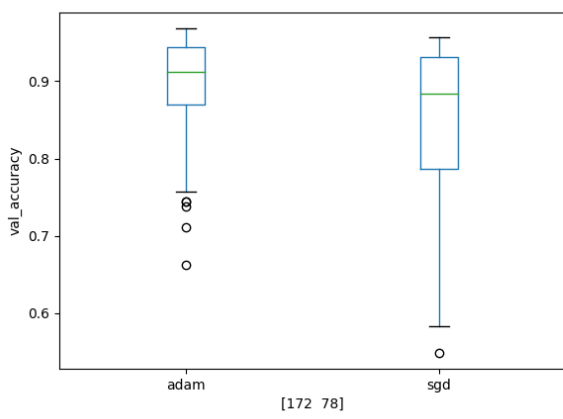
Boxplot grouped by optimizer

**C50**

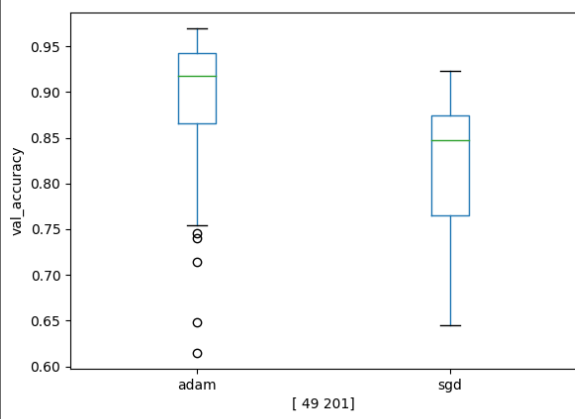
Boxplot grouped by optimizer

**C75**

Boxplot grouped by optimizer

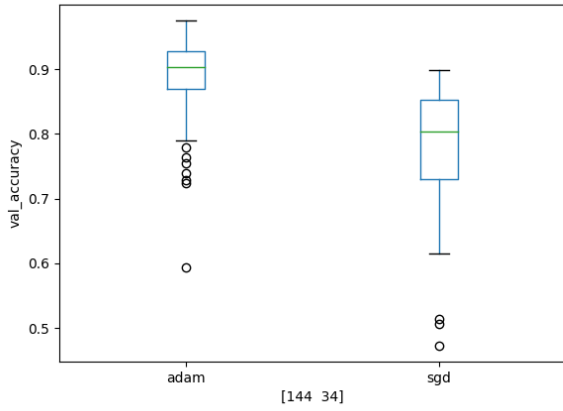
**C100**

Boxplot grouped by optimizer



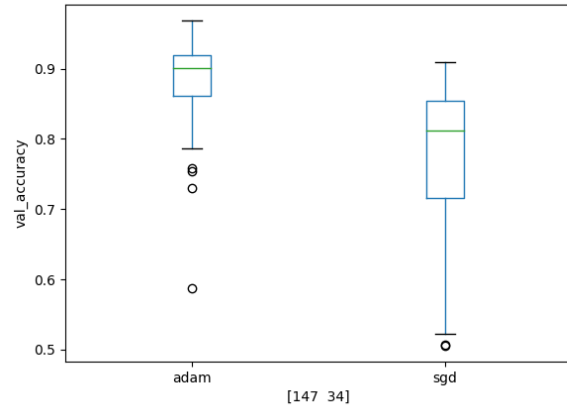
### E25

Boxplot grouped by optimizer



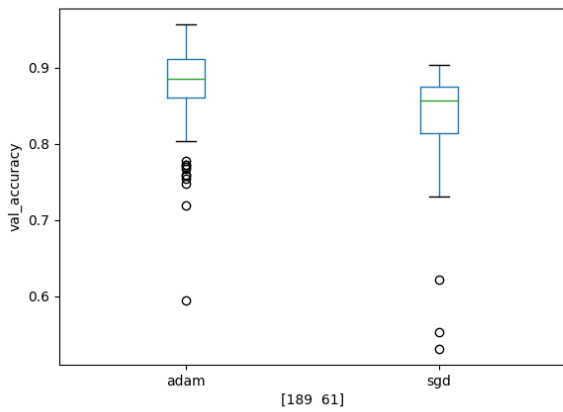
### E50

Boxplot grouped by optimizer



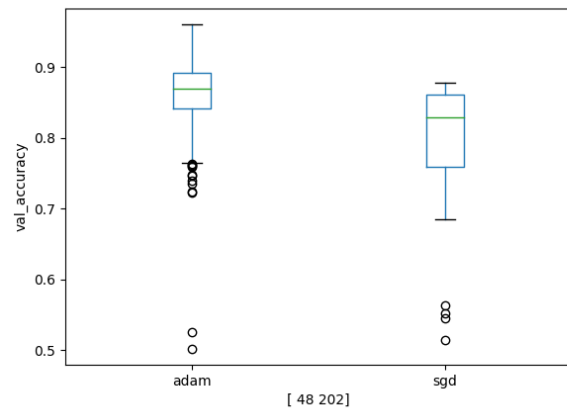
### E75

Boxplot grouped by optimizer



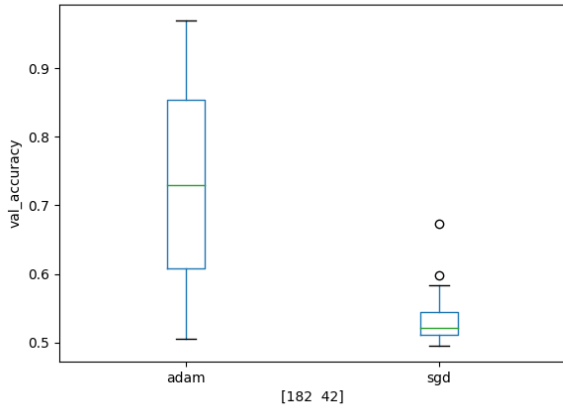
### E100

Boxplot grouped by optimizer



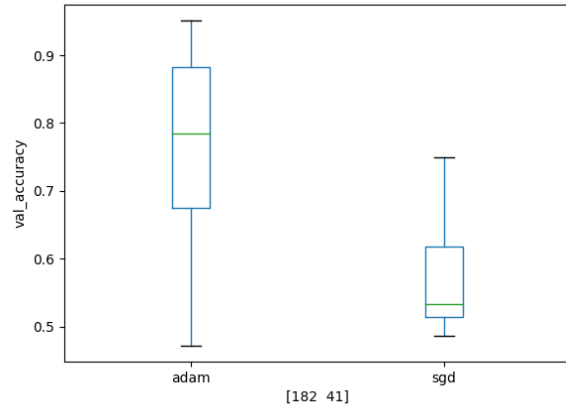
### F25

Boxplot grouped by optimizer



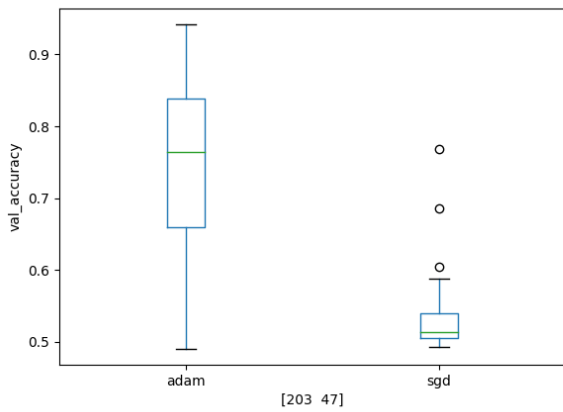
### F50

Boxplot grouped by optimizer



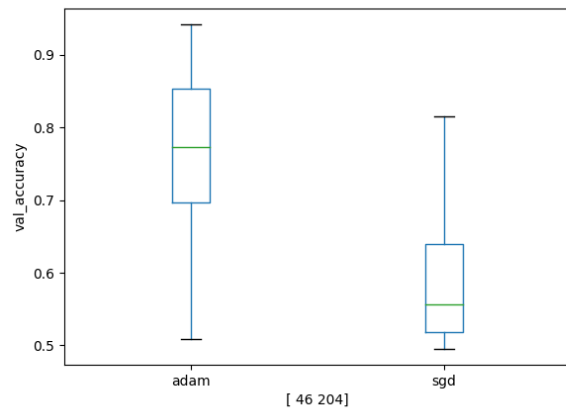
### F75

Boxplot grouped by optimizer

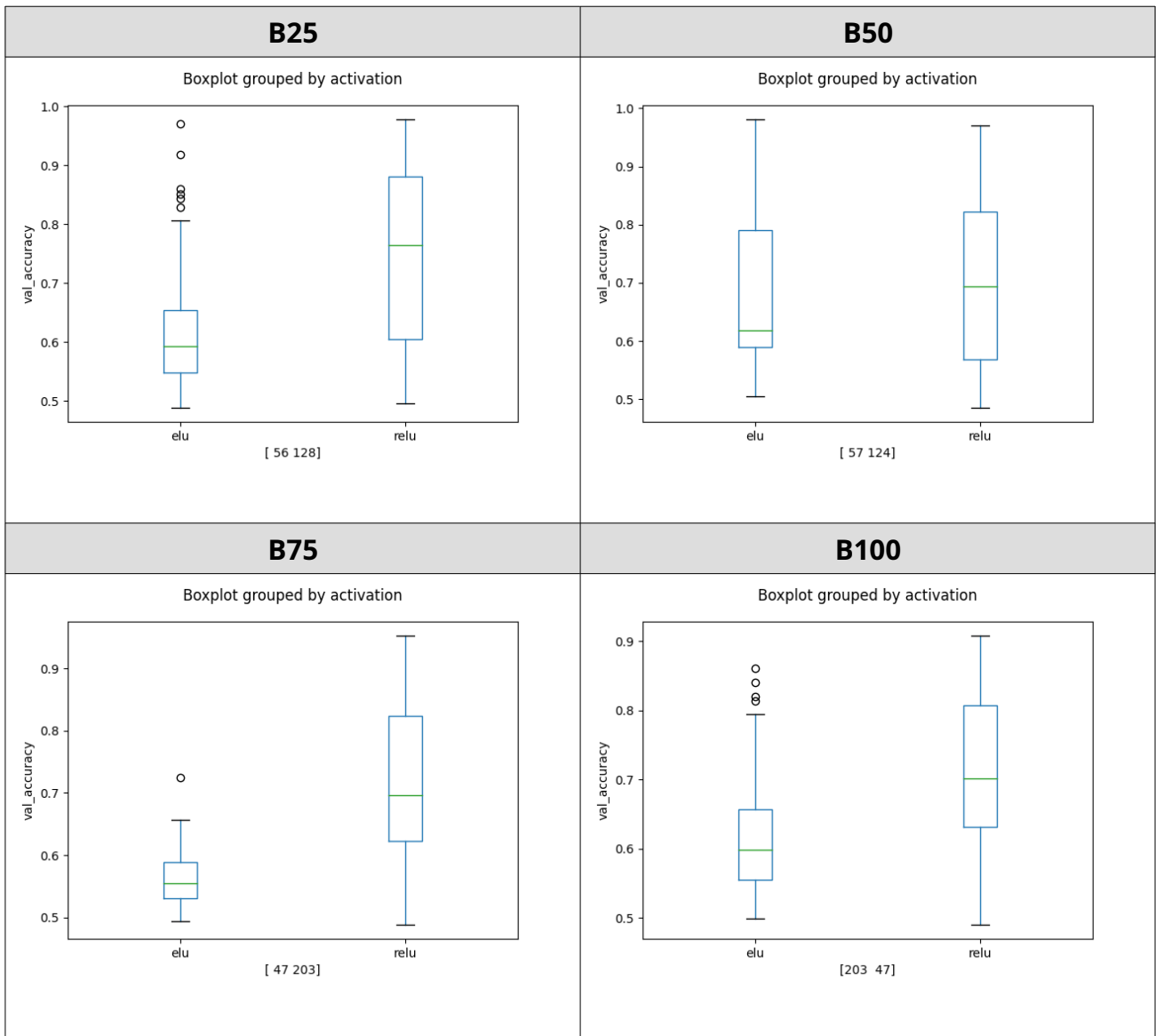


### F100

Boxplot grouped by optimizer

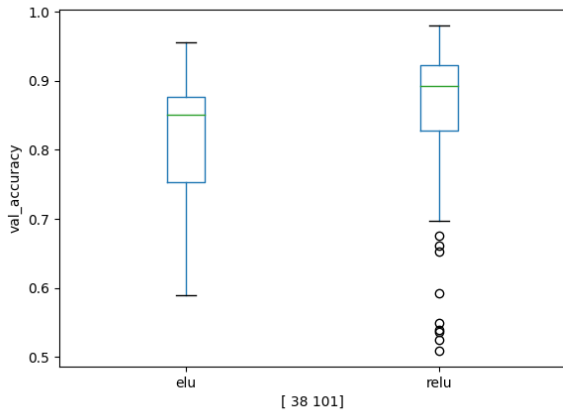


### A.1.8 activation

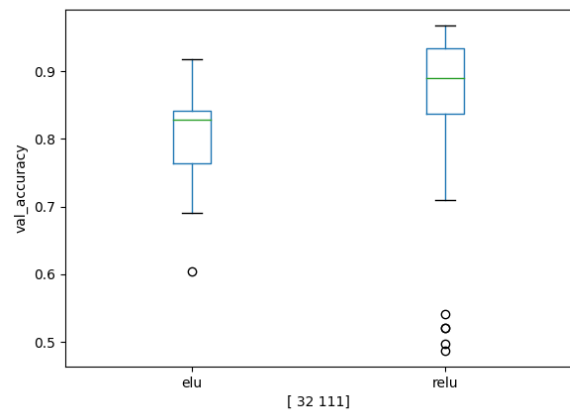


**C25**

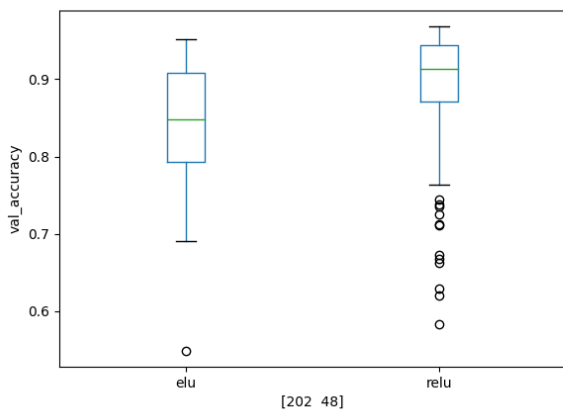
Boxplot grouped by activation

**C50**

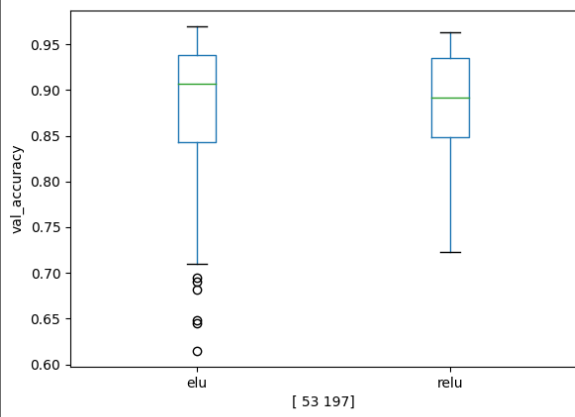
Boxplot grouped by activation

**C75**

Boxplot grouped by activation

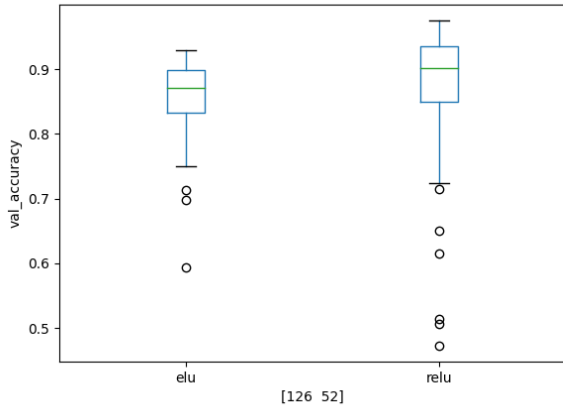
**C100**

Boxplot grouped by activation



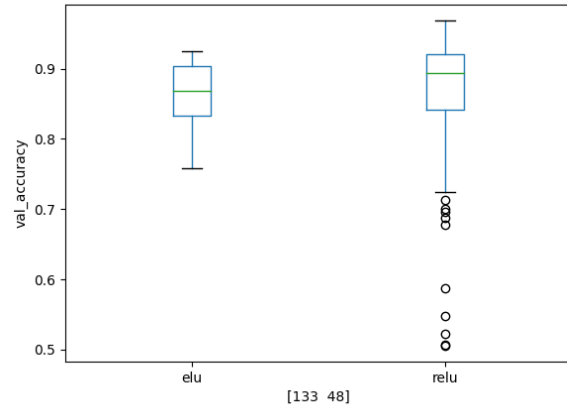
### E25

Boxplot grouped by activation



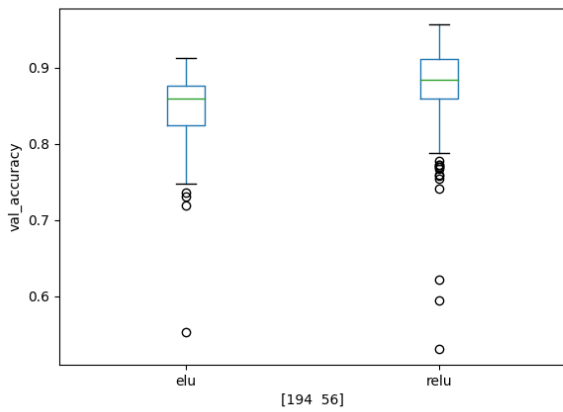
### E50

Boxplot grouped by activation



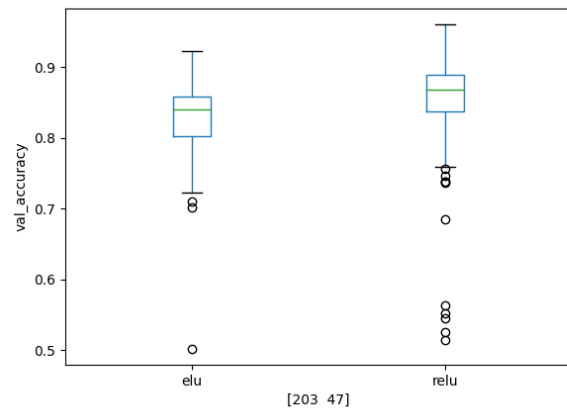
### E75

Boxplot grouped by activation



### E100

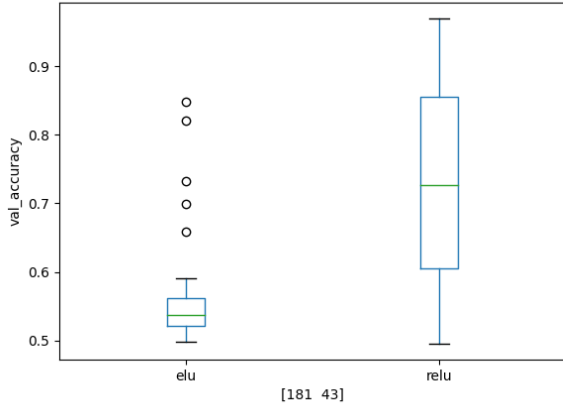
Boxplot grouped by activation



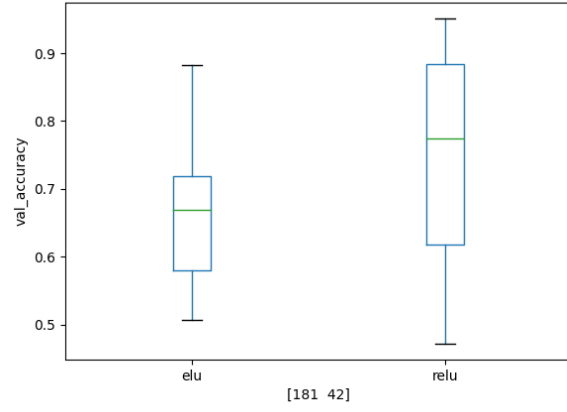


**F25**

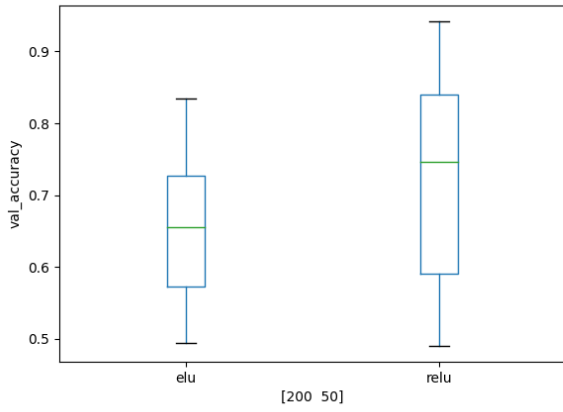
Boxplot grouped by activation

**F50**

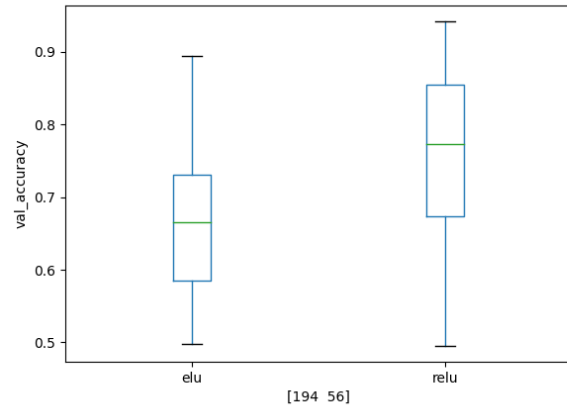
Boxplot grouped by activation

**F75**

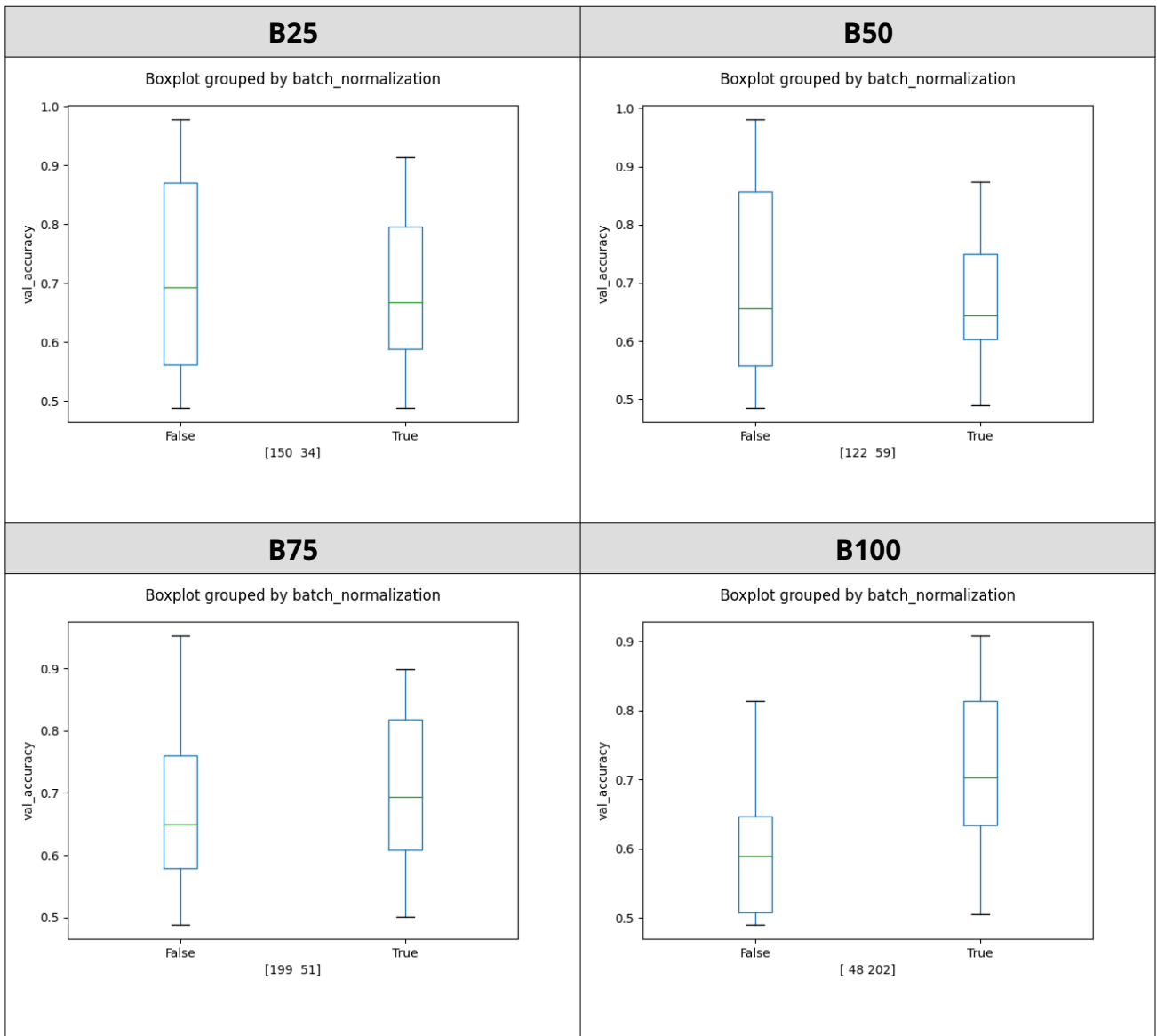
Boxplot grouped by activation

**F100**

Boxplot grouped by activation

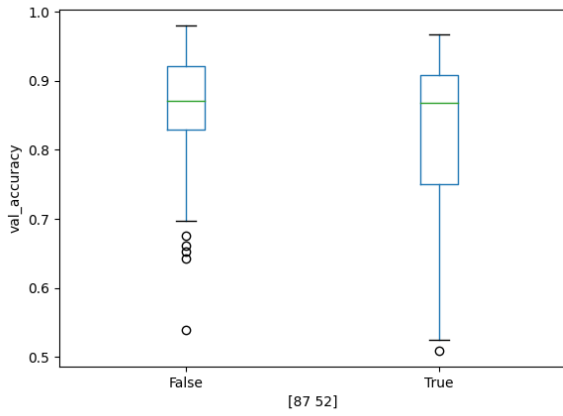


### A.1.9 *batch\_normalization*

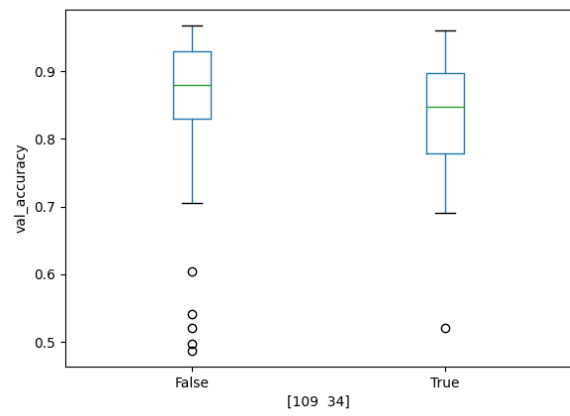


**C25**

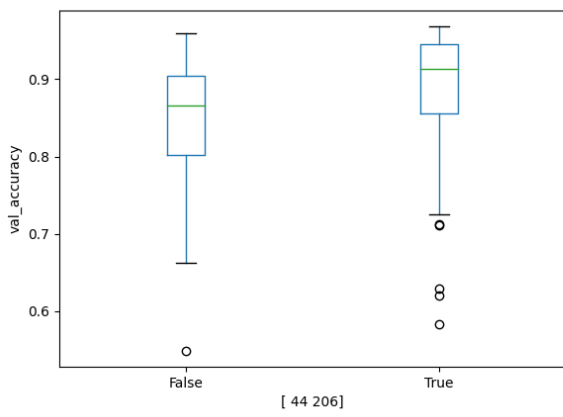
Boxplot grouped by batch\_normalization

**C50**

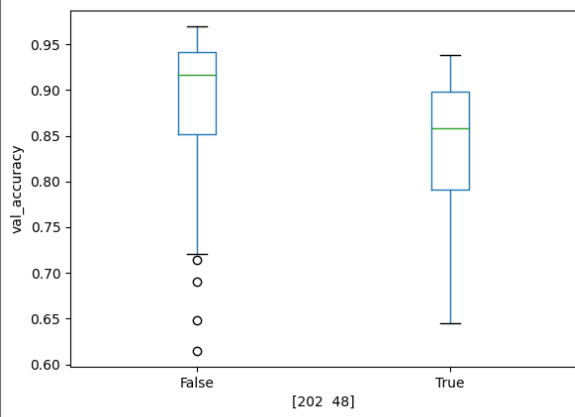
Boxplot grouped by batch\_normalization

**C75**

Boxplot grouped by batch\_normalization

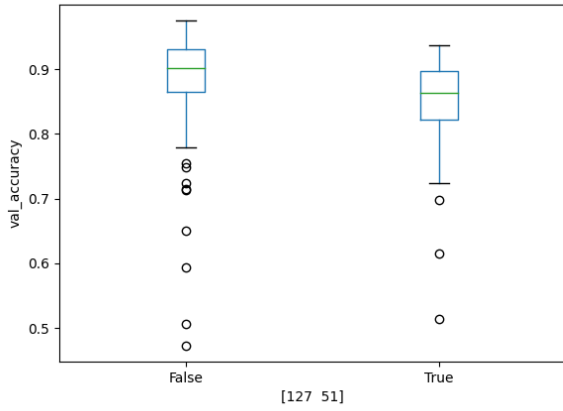
**C100**

Boxplot grouped by batch\_normalization

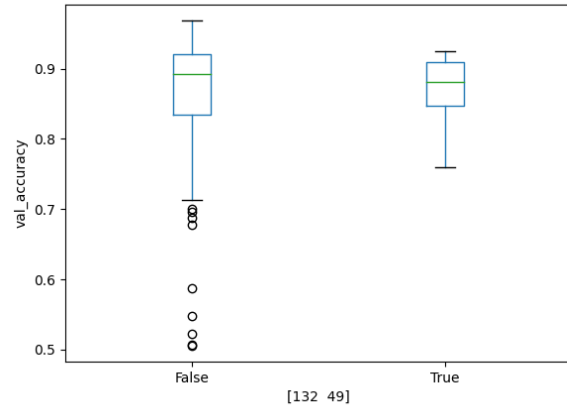


**E25**

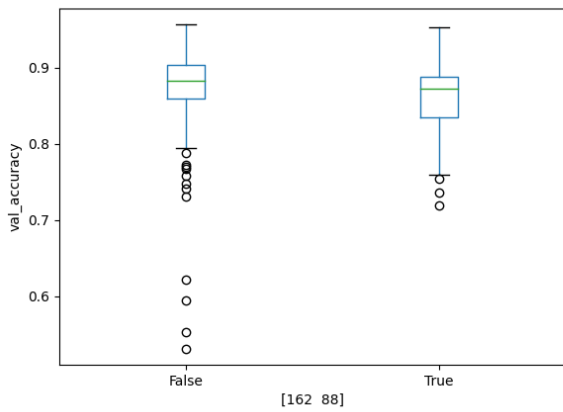
Boxplot grouped by batch\_normalization

**E50**

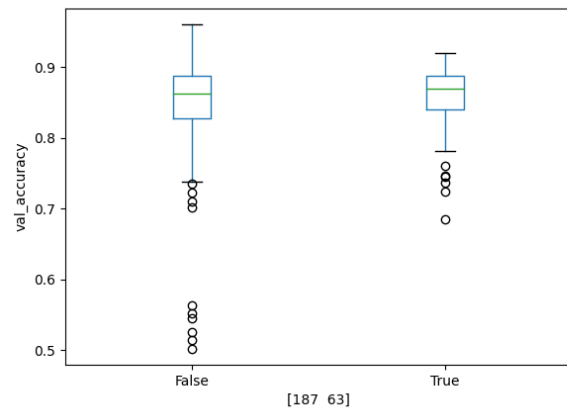
Boxplot grouped by batch\_normalization

**E75**

Boxplot grouped by batch\_normalization

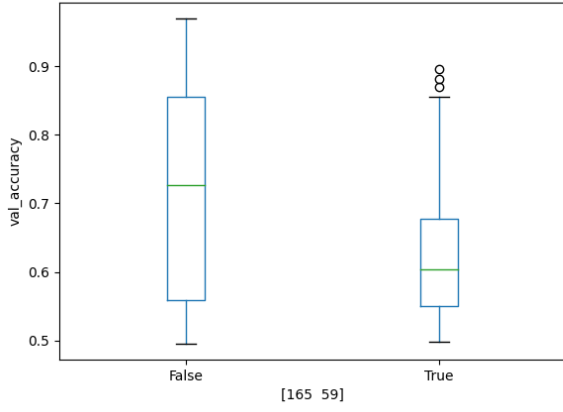
**E100**

Boxplot grouped by batch\_normalization

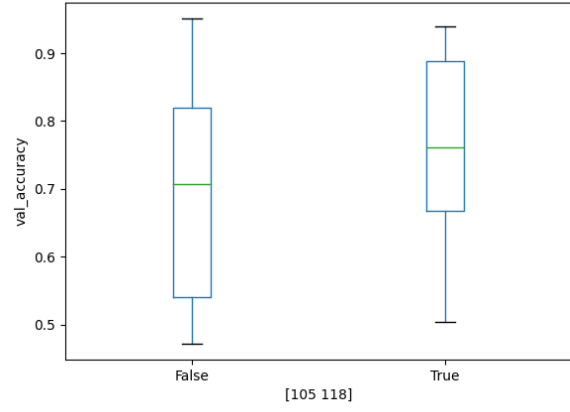


**F25**

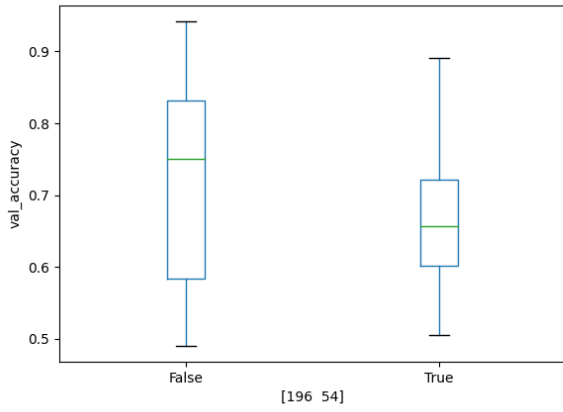
Boxplot grouped by batch\_normalization

**F50**

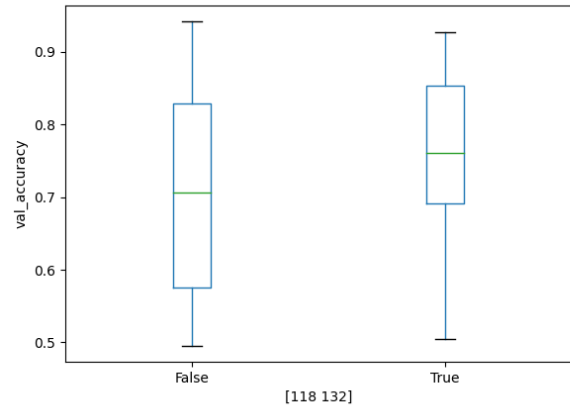
Boxplot grouped by batch\_normalization

**F75**

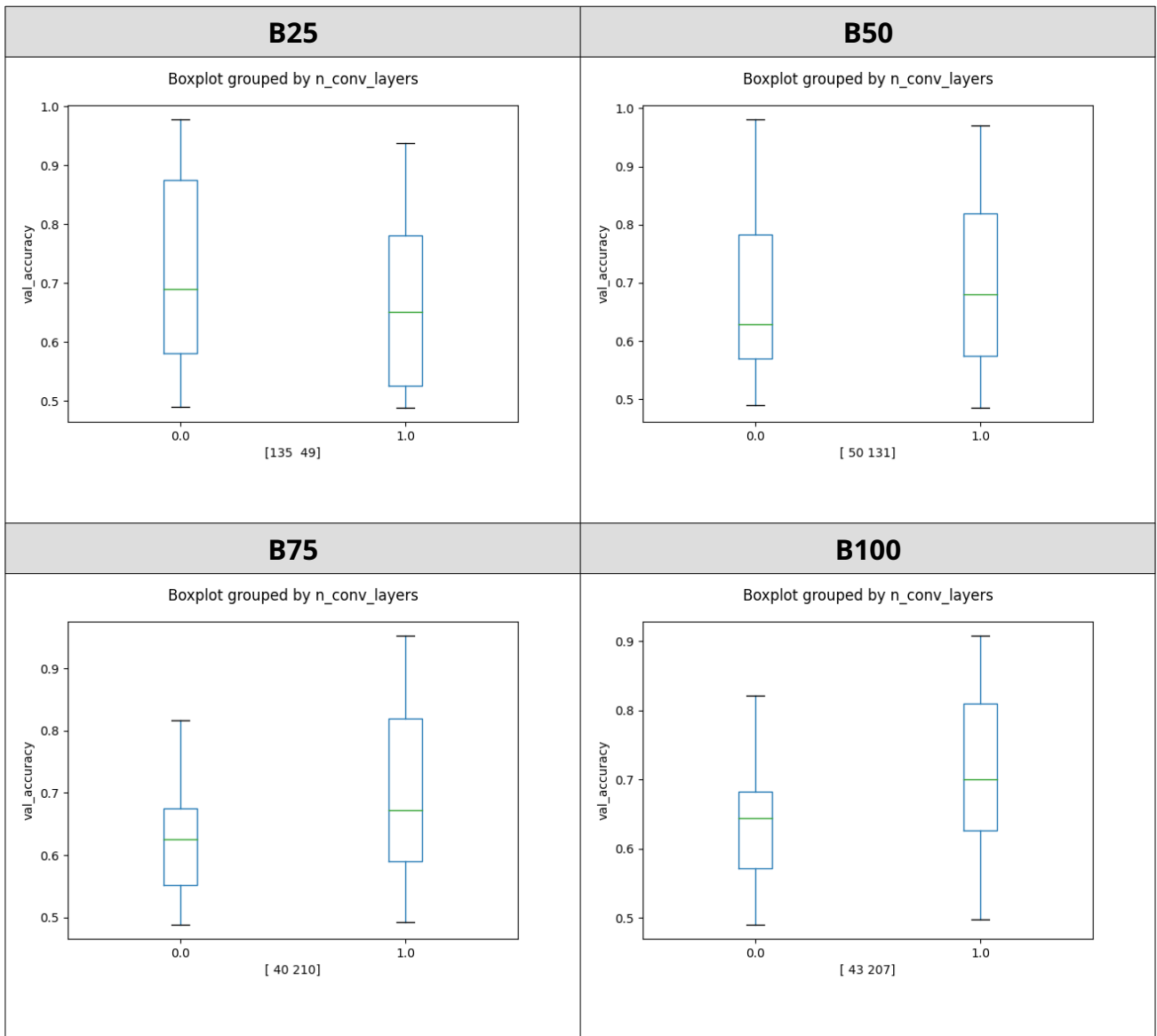
Boxplot grouped by batch\_normalization

**F100**

Boxplot grouped by batch\_normalization

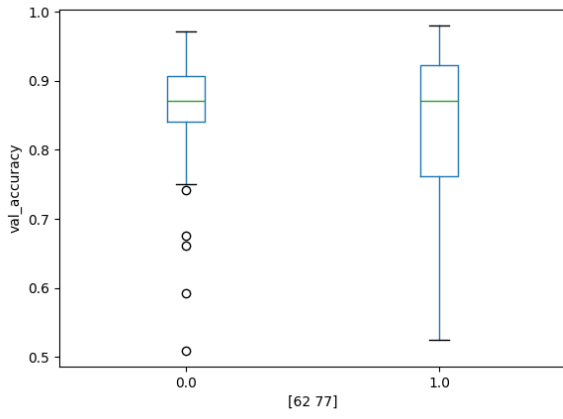


### A.1.10 $n_{conv\_layers}$

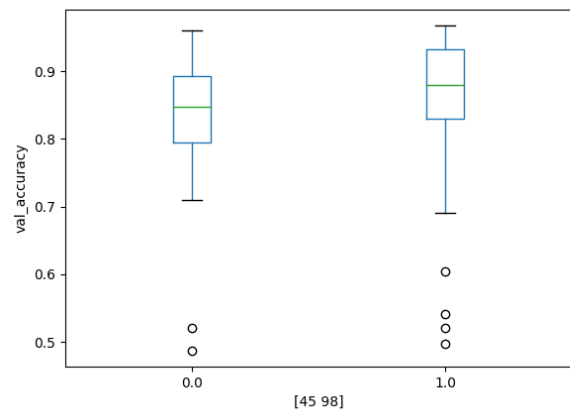


**C25**

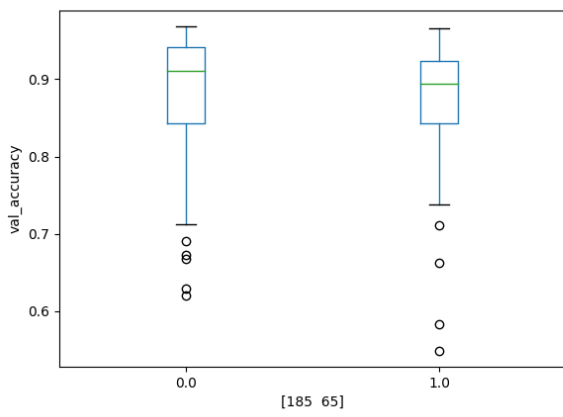
Boxplot grouped by n\_conv\_layers

**C50**

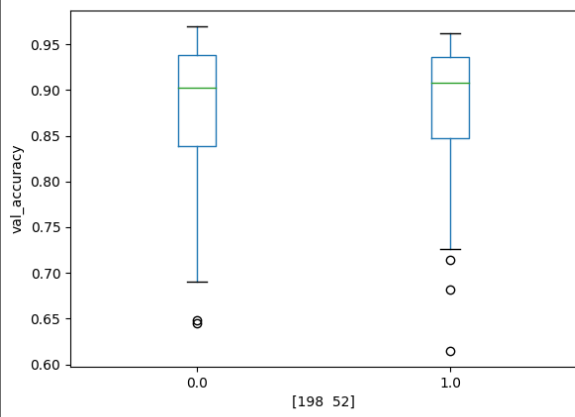
Boxplot grouped by n\_conv\_layers

**C75**

Boxplot grouped by n\_conv\_layers

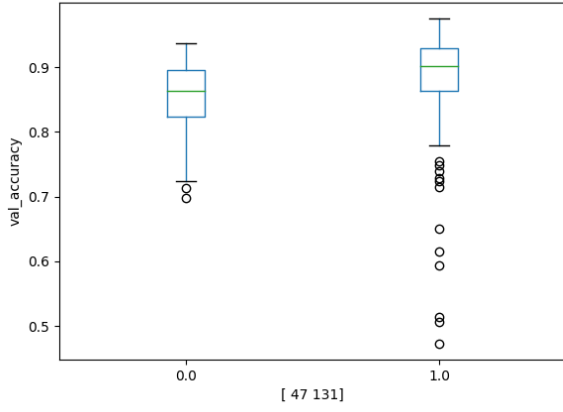
**C100**

Boxplot grouped by n\_conv\_layers

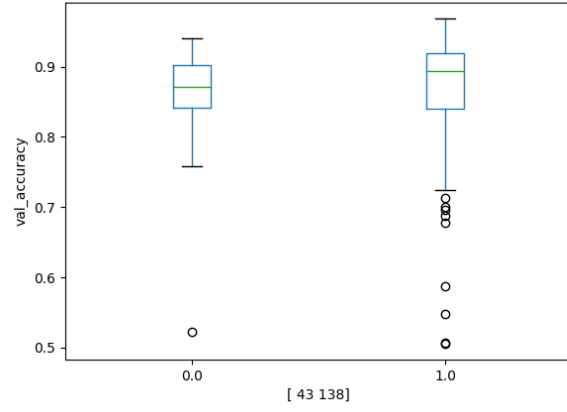


**E25**

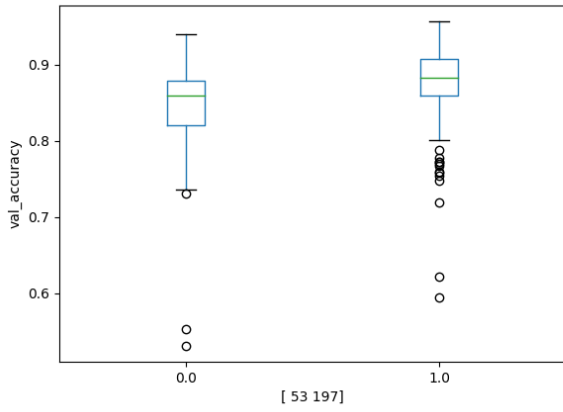
Boxplot grouped by n\_conv\_layers

**E50**

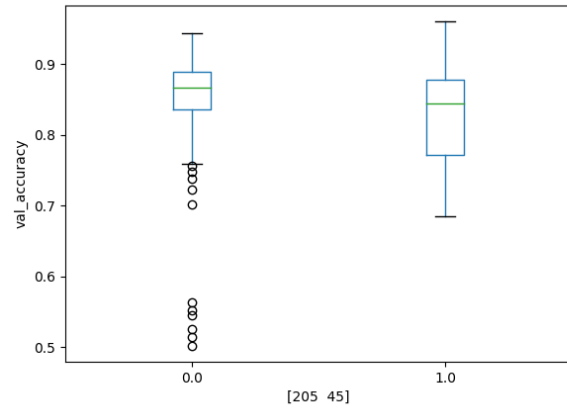
Boxplot grouped by n\_conv\_layers

**E75**

Boxplot grouped by n\_conv\_layers

**E100**

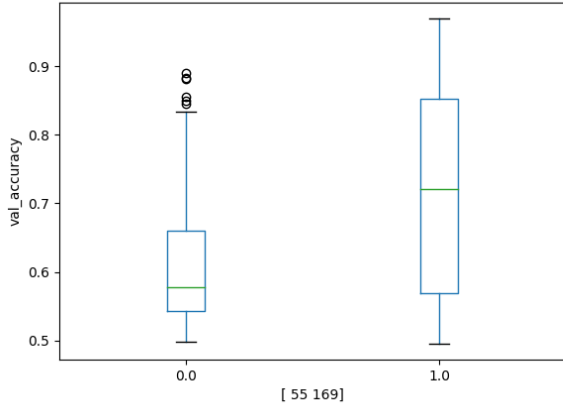
Boxplot grouped by n\_conv\_layers





**F25**

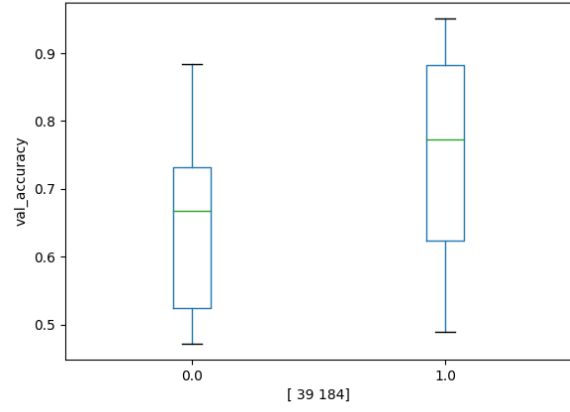
Boxplot grouped by n\_conv\_layers



[ 55 169]

**F50**

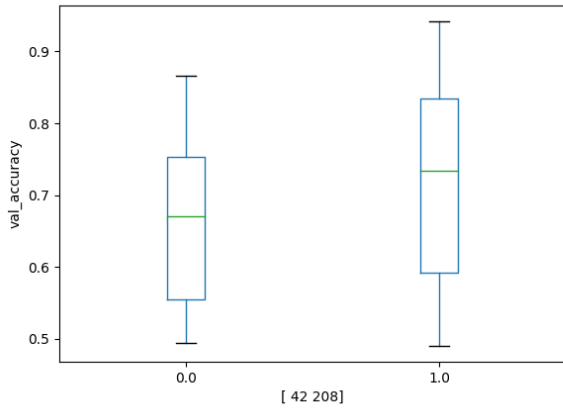
Boxplot grouped by n\_conv\_layers



[ 39 184]

**F75**

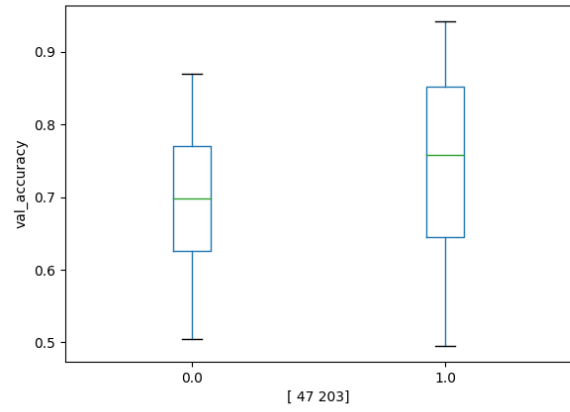
Boxplot grouped by n\_conv\_layers



[ 42 208]

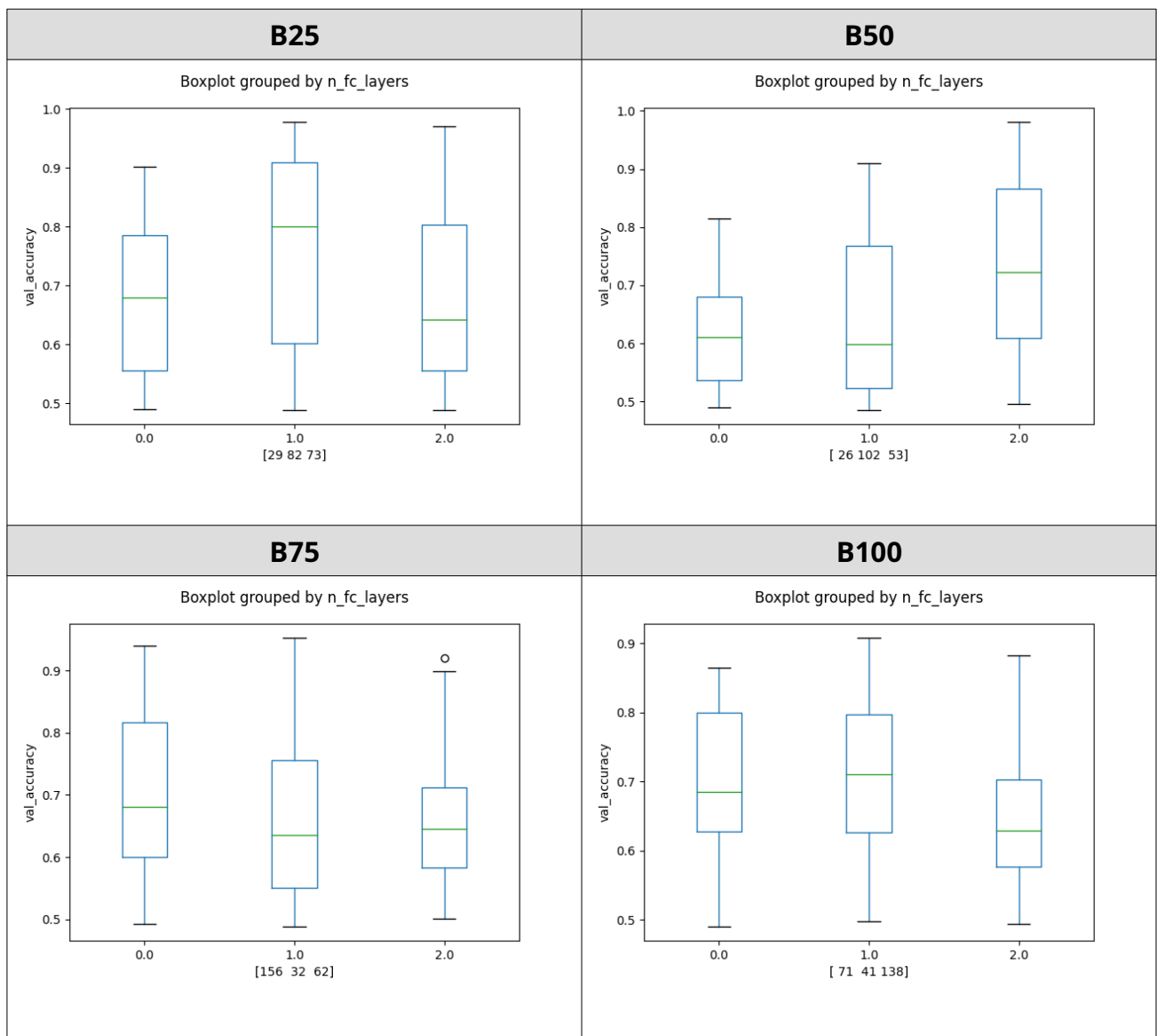
**F100**

Boxplot grouped by n\_conv\_layers



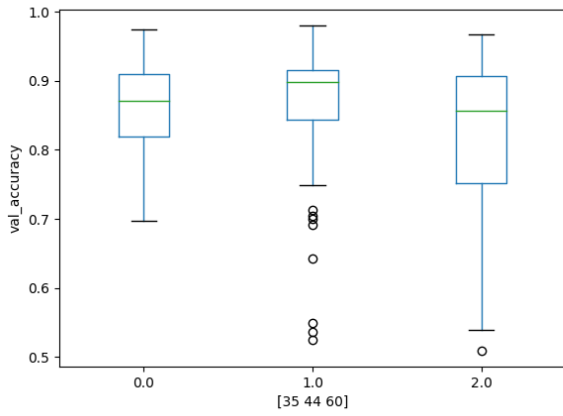
[ 47 203]

### A.1.11 $n_{fc\_layers}$



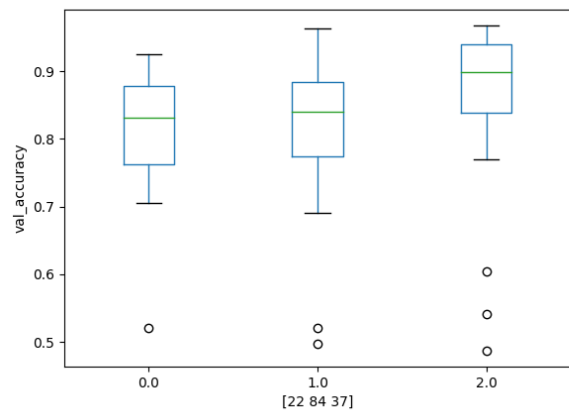
### C25

Boxplot grouped by n\_fc\_layers



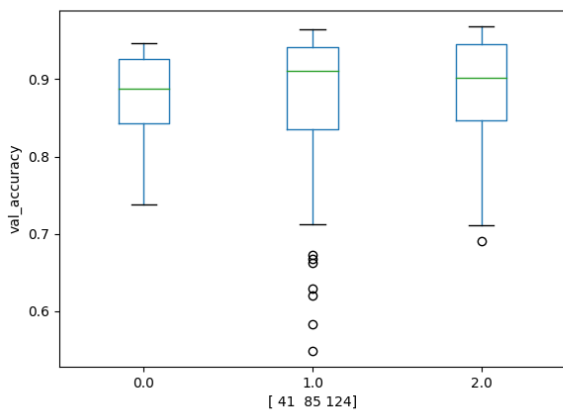
### C50

Boxplot grouped by n\_fc\_layers



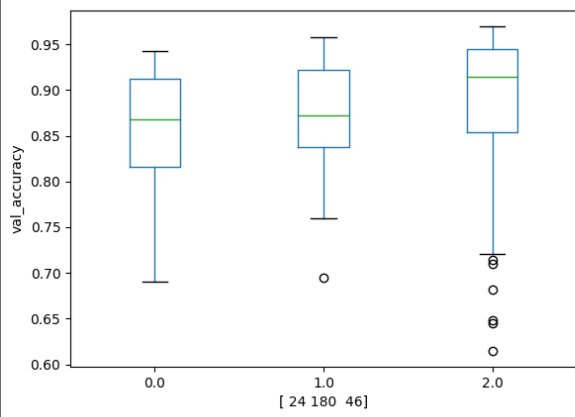
### C75

Boxplot grouped by n\_fc\_layers



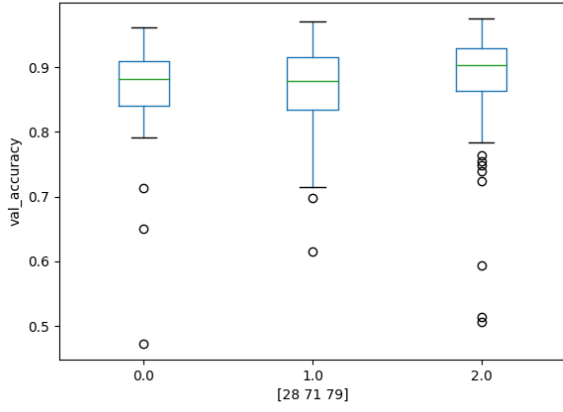
### C100

Boxplot grouped by n\_fc\_layers

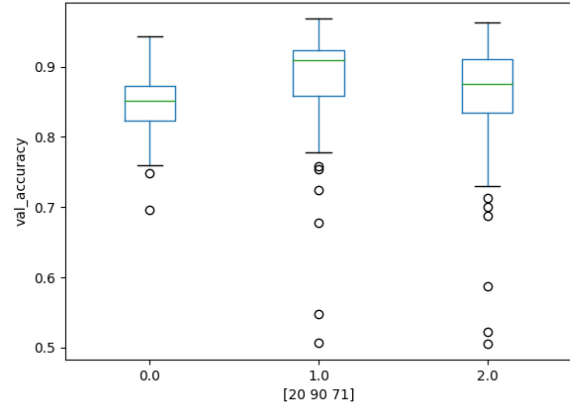


**E25**

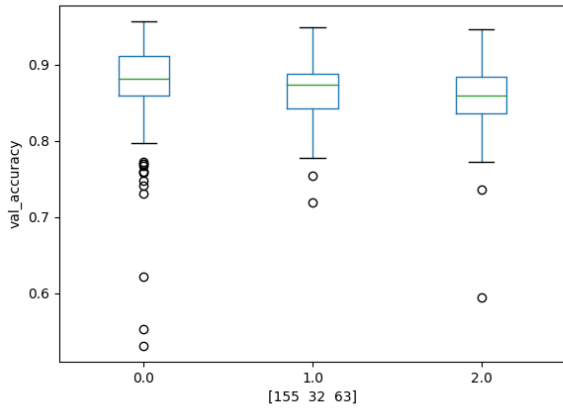
Boxplot grouped by n\_fc\_layers

**E50**

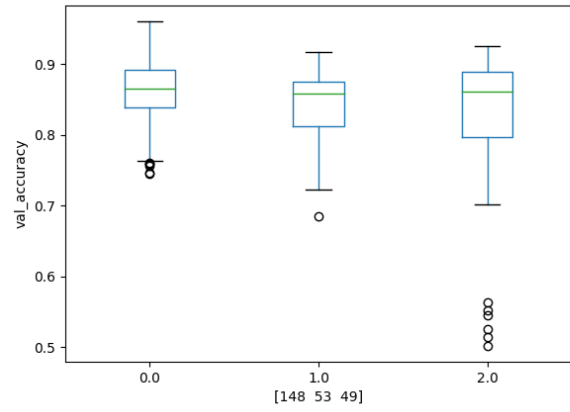
Boxplot grouped by n\_fc\_layers

**E75**

Boxplot grouped by n\_fc\_layers

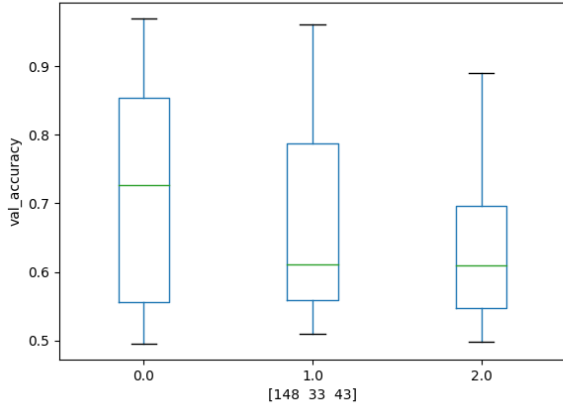
**E100**

Boxplot grouped by n\_fc\_layers

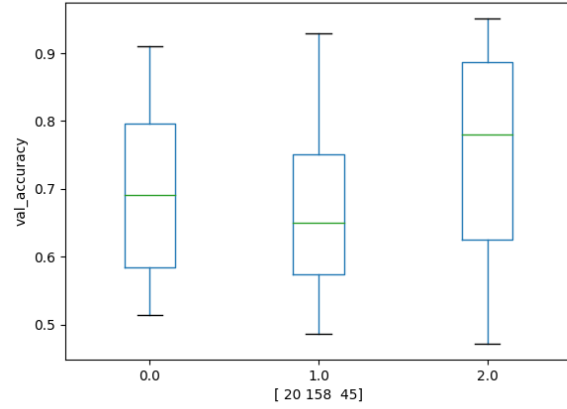


**F25**

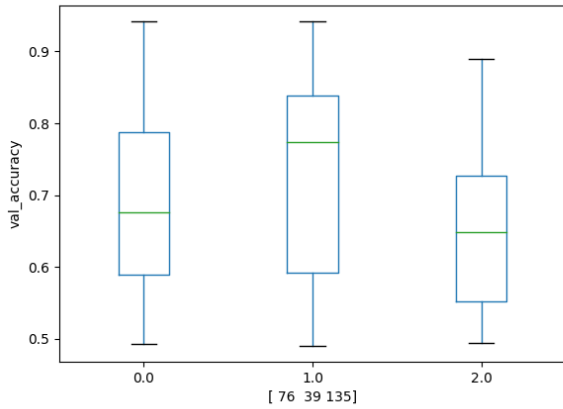
Boxplot grouped by n\_fc\_layers

**F50**

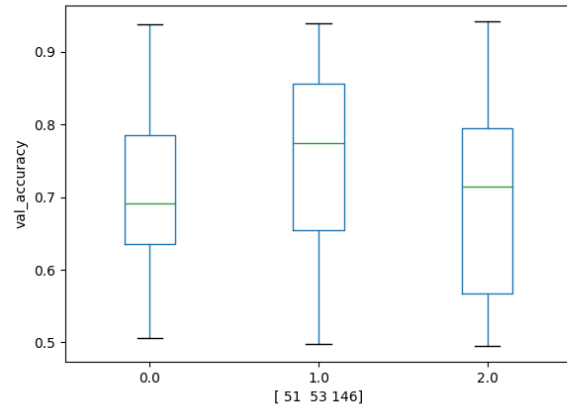
Boxplot grouped by n\_fc\_layers

**F75**

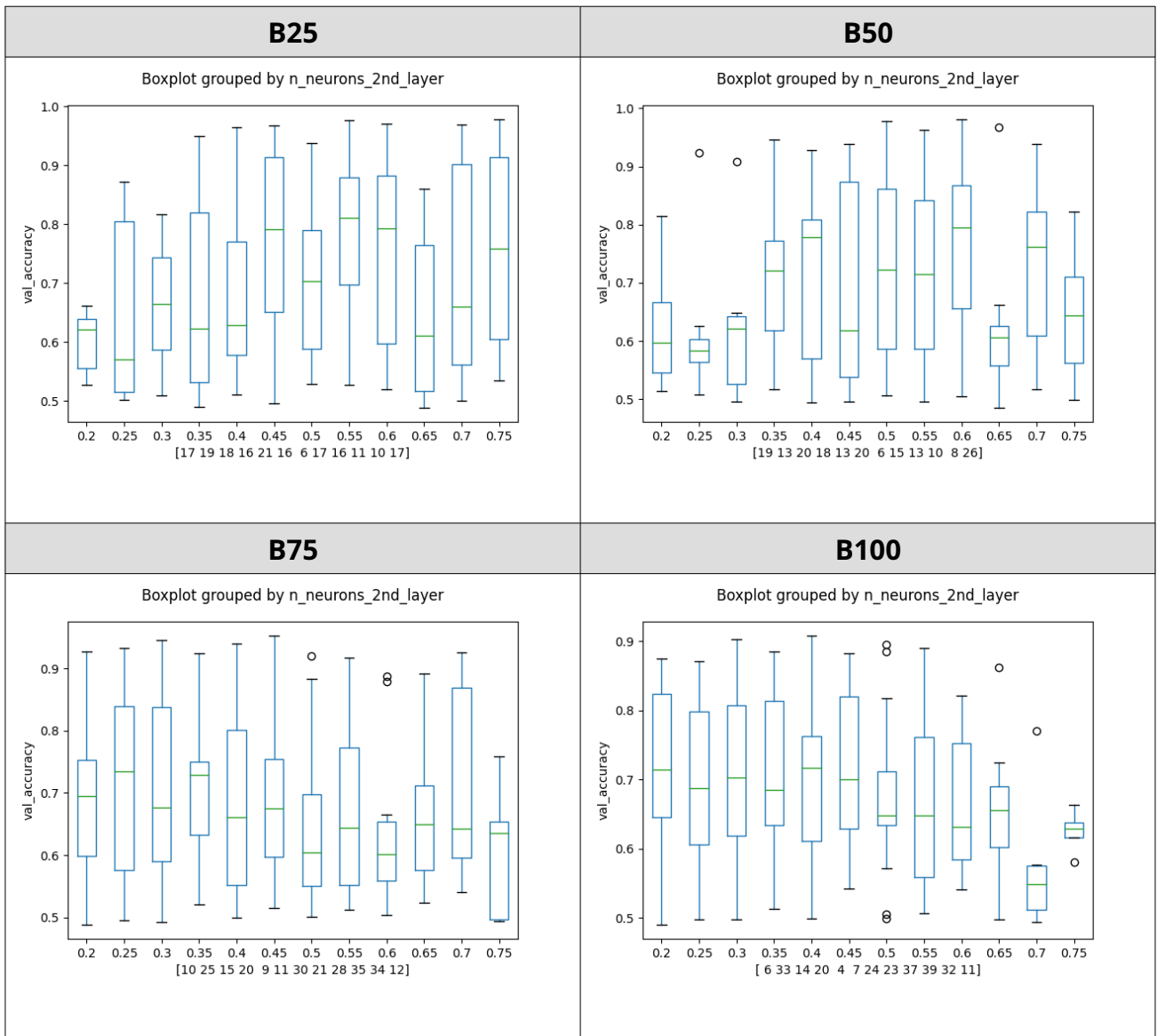
Boxplot grouped by n\_fc\_layers

**F100**

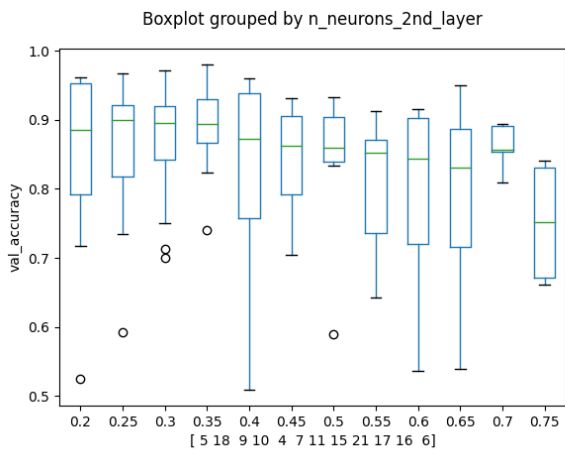
Boxplot grouped by n\_fc\_layers



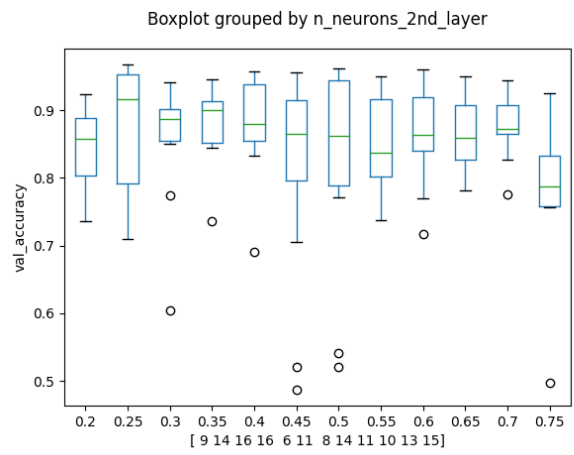
### A.1.12 $n\_neurons\_2nd\_layer$



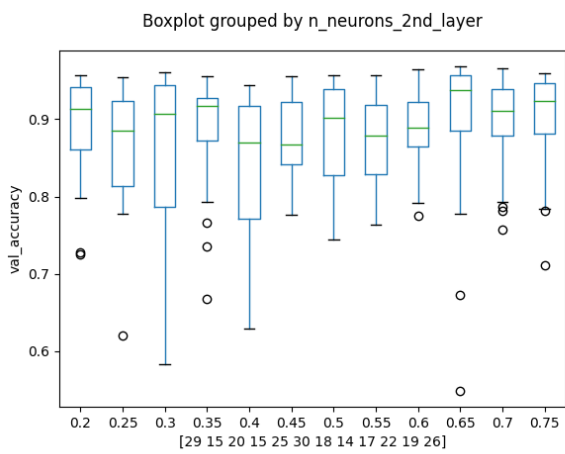
### C25



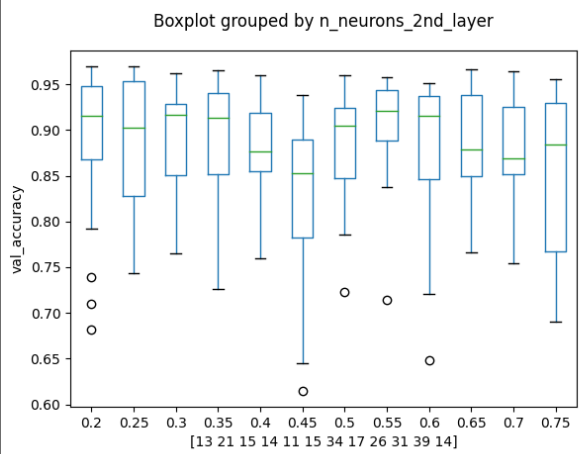
### C50



### C75

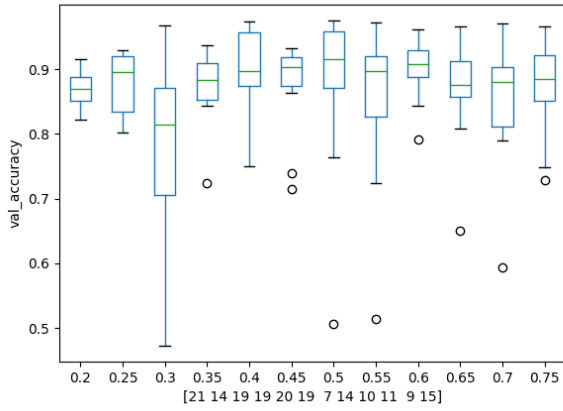


### C100



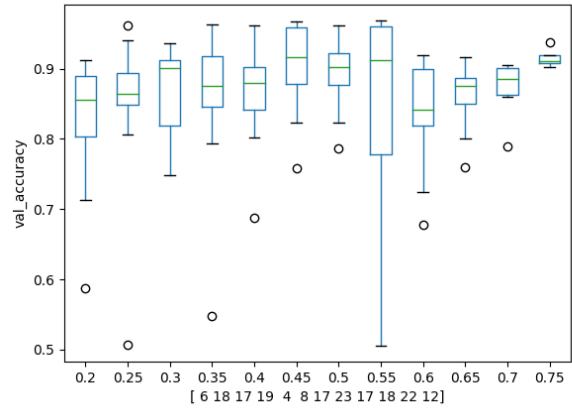
### E25

Boxplot grouped by n\_neurons\_2nd\_layer



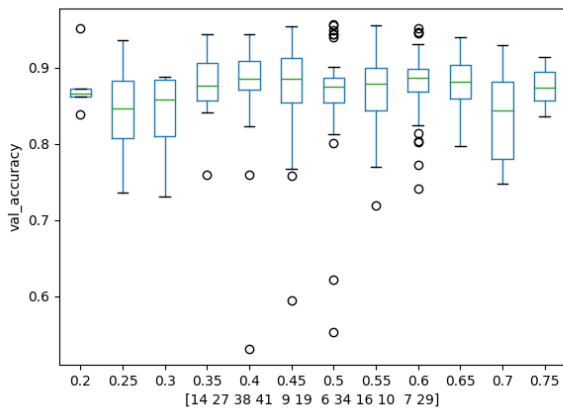
### E50

Boxplot grouped by n\_neurons\_2nd\_layer



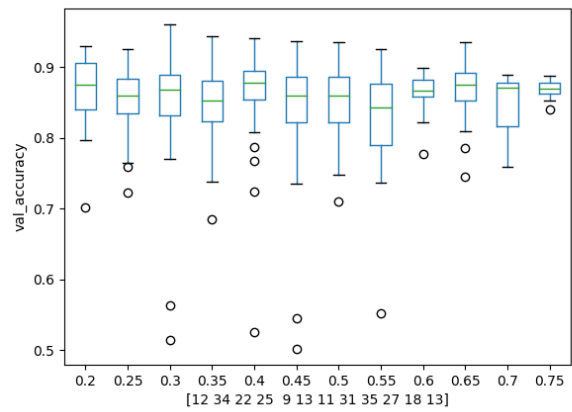
### E75

Boxplot grouped by n\_neurons\_2nd\_layer



### E100

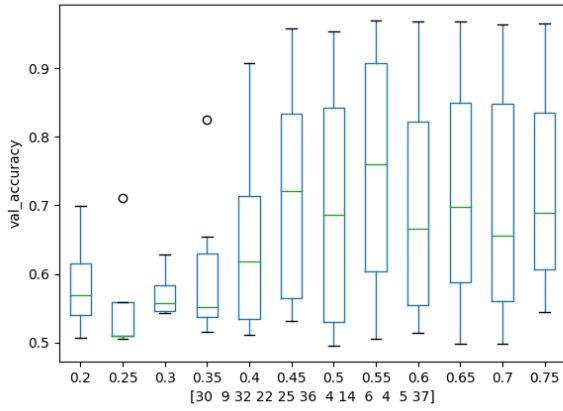
Boxplot grouped by n\_neurons\_2nd\_layer





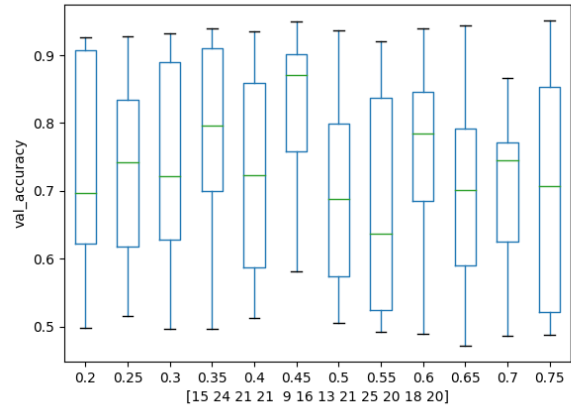
### F25

Boxplot grouped by n\_neurons\_2nd\_layer



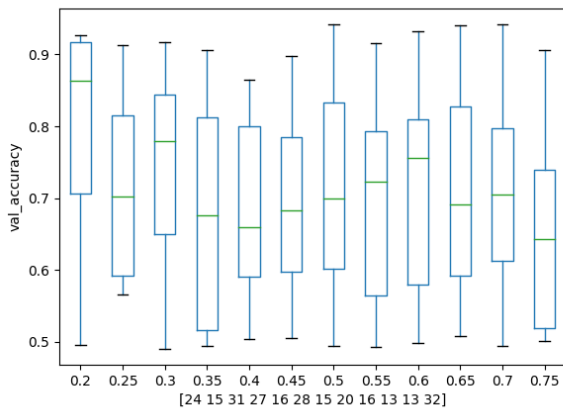
### F50

Boxplot grouped by n\_neurons\_2nd\_layer



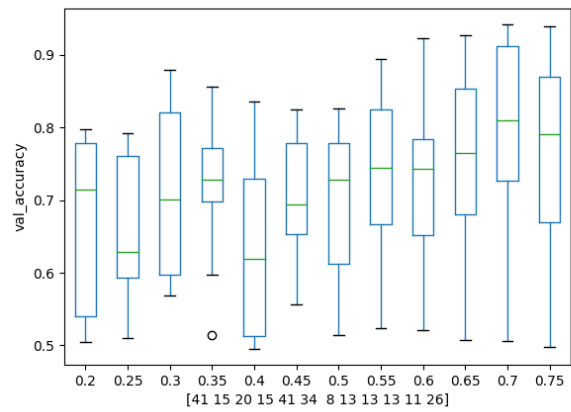
### F75

Boxplot grouped by n\_neurons\_2nd\_layer

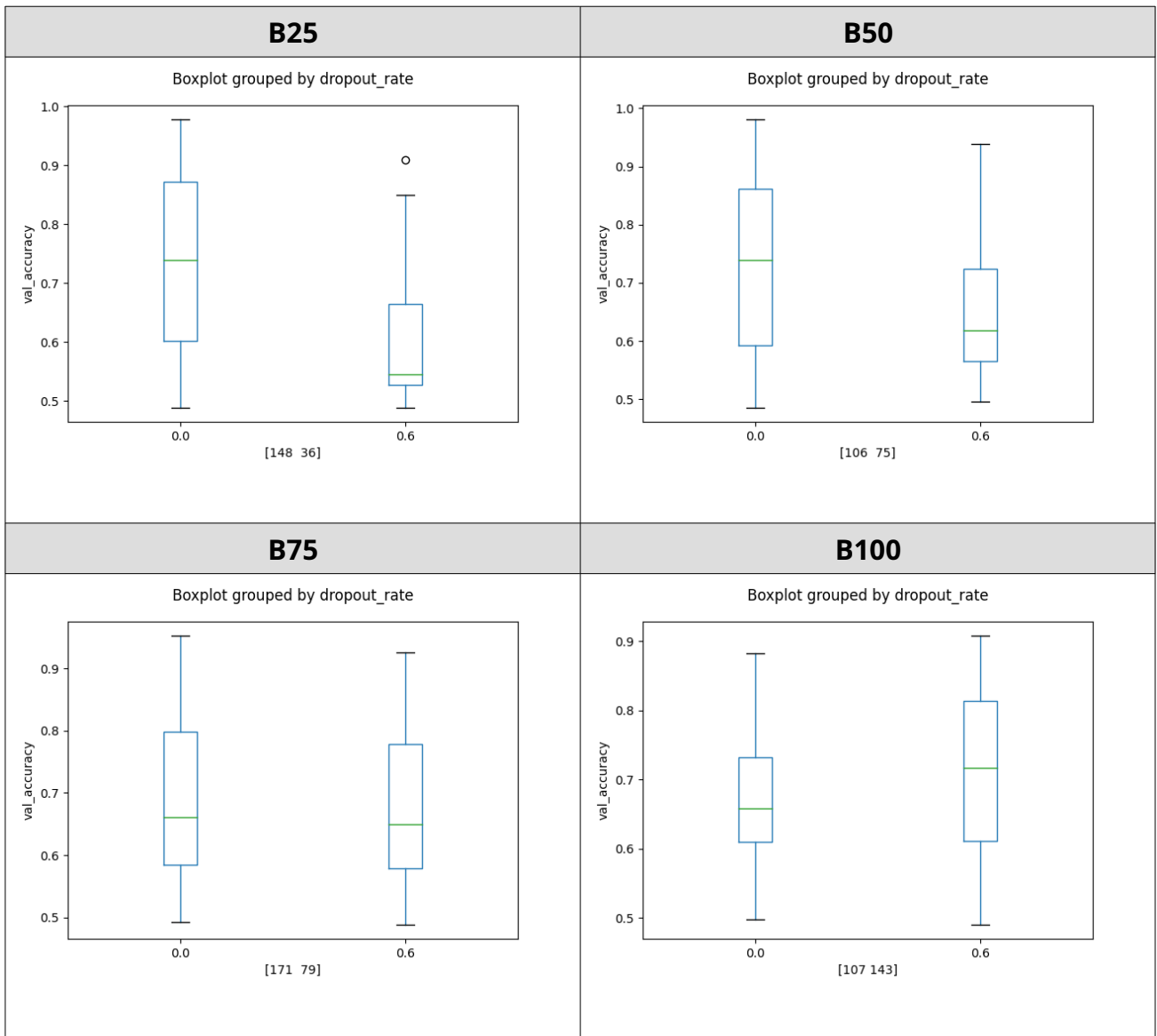


### F100

Boxplot grouped by n\_neurons\_2nd\_layer

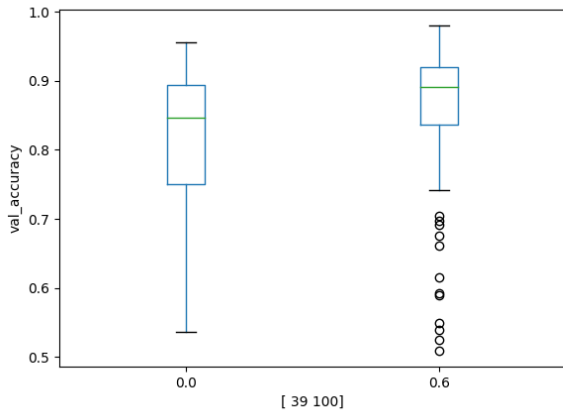


### A.1.13 dropout\_rate

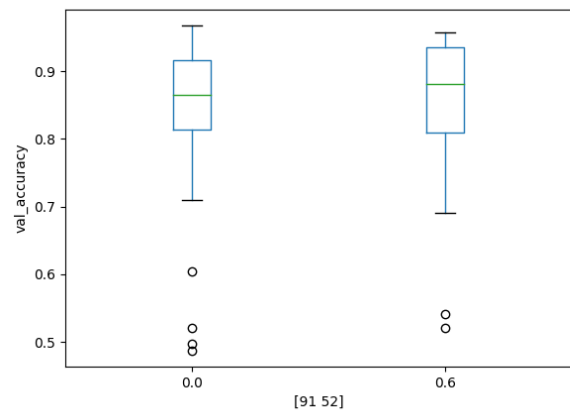


**C25**

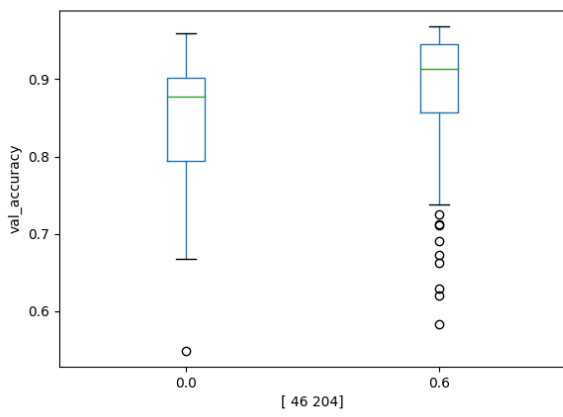
Boxplot grouped by dropout\_rate

**C50**

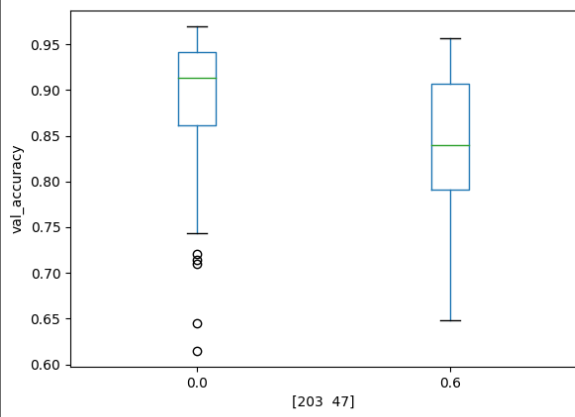
Boxplot grouped by dropout\_rate

**C75**

Boxplot grouped by dropout\_rate

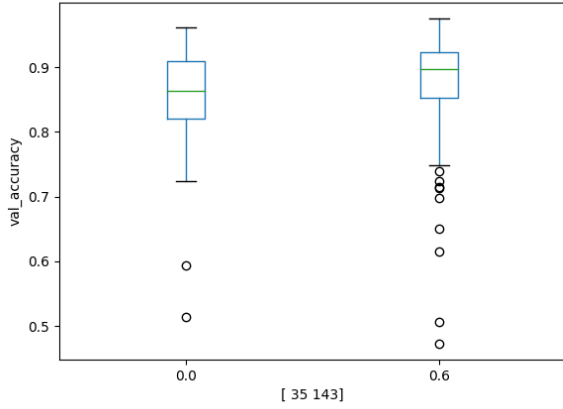
**C100**

Boxplot grouped by dropout\_rate



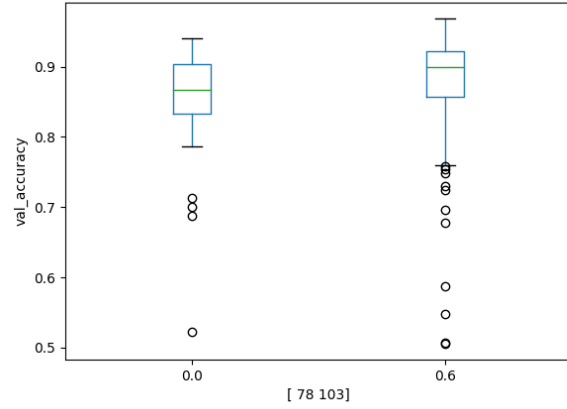
### E25

Boxplot grouped by dropout\_rate



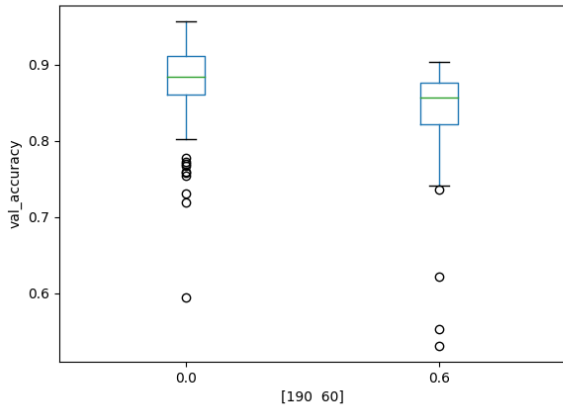
### E50

Boxplot grouped by dropout\_rate



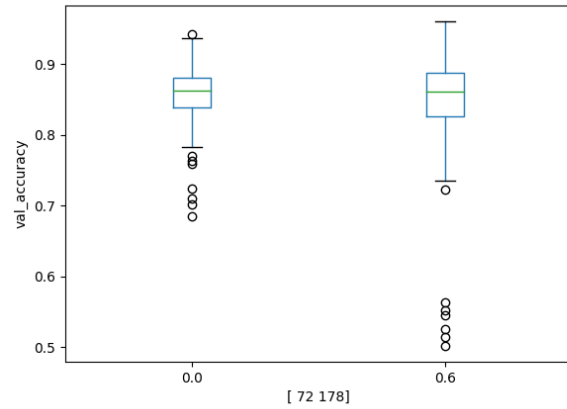
### E75

Boxplot grouped by dropout\_rate



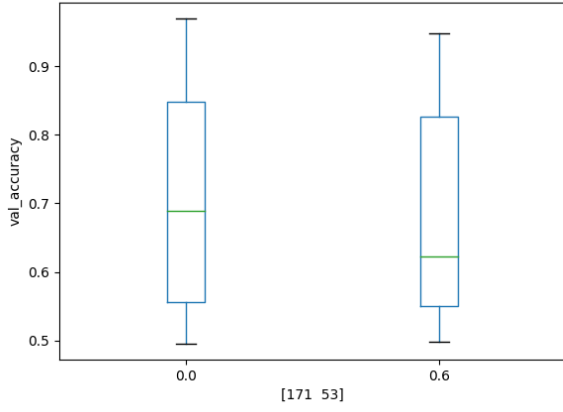
### E100

Boxplot grouped by dropout\_rate

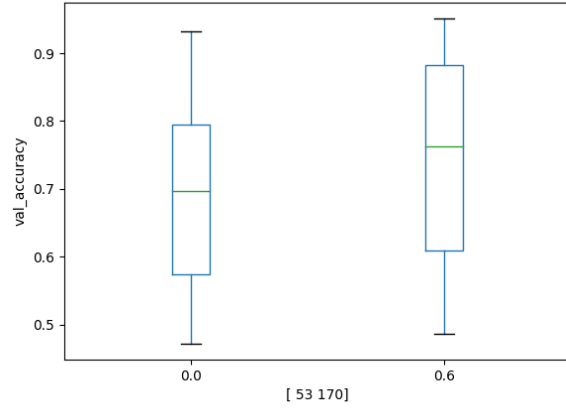


**F25**

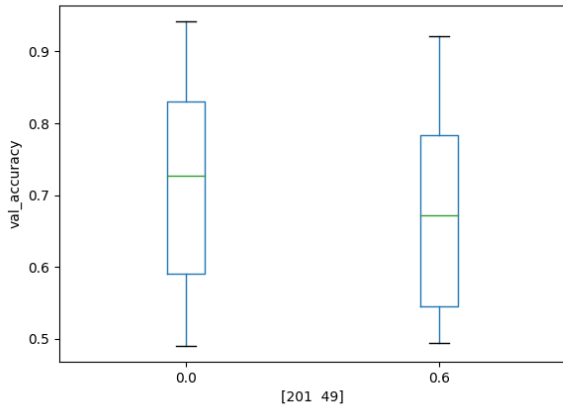
Boxplot grouped by dropout\_rate

**F50**

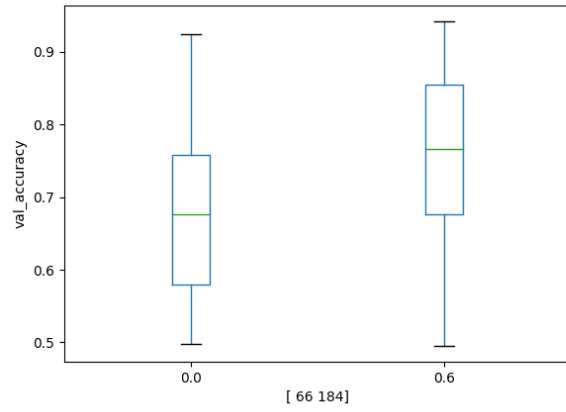
Boxplot grouped by dropout\_rate

**F75**

Boxplot grouped by dropout\_rate

**F100**

Boxplot grouped by dropout\_rate



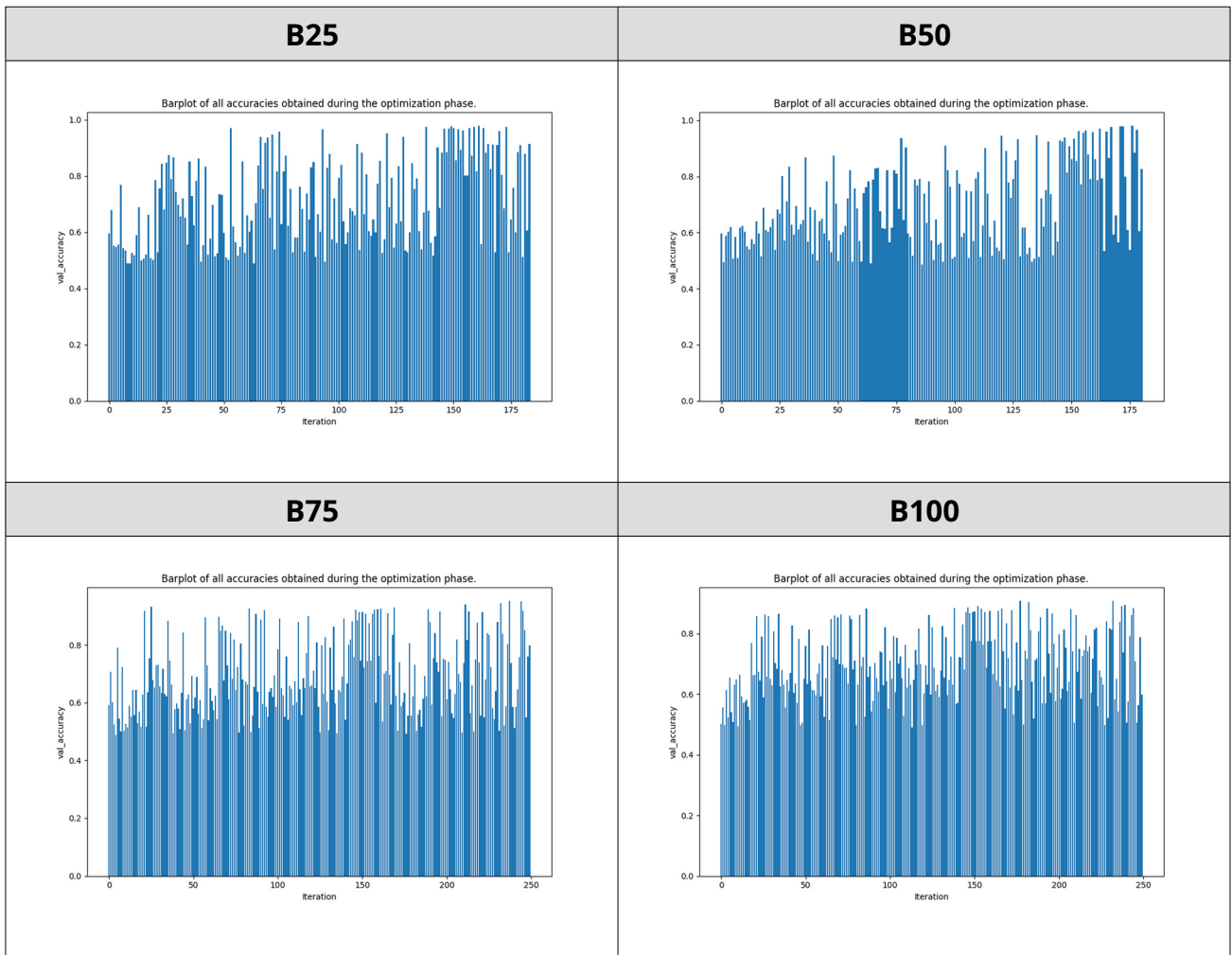
## A.2 Survey validation results

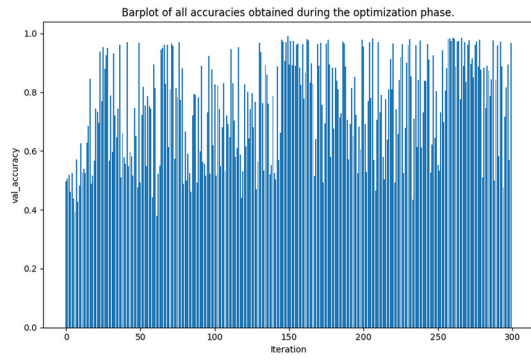
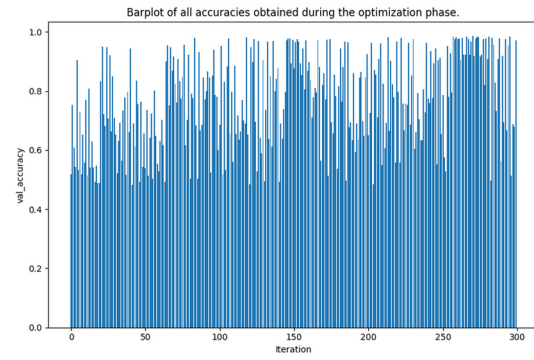
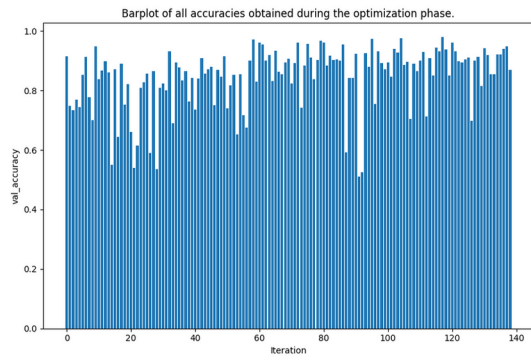
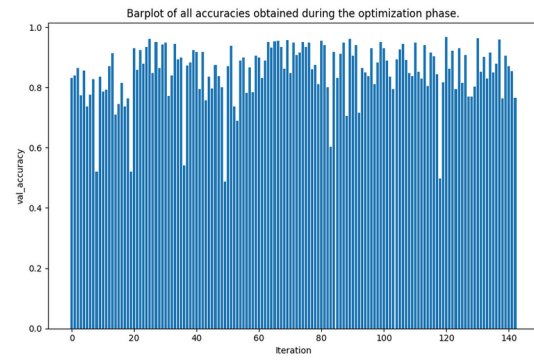
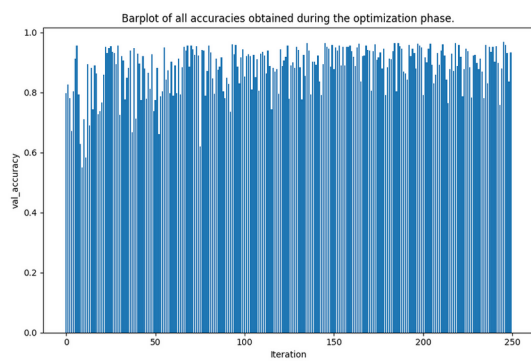
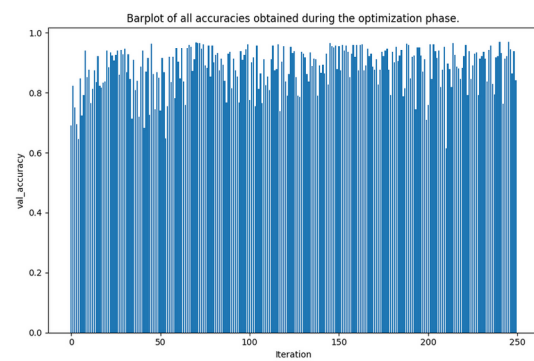
This appendix section collects the survey validation results for each subject and data crop and displays it in a bar-plot or a scatter-plot style graph.

Each page collects the results for one subject and all of its possible data crops and follows the same naming as the hyperparameter optimization data: the first letter indicates the subject name and the following numbers indicate the percentage of the full data that was used for the optimization of the hyperparameters.

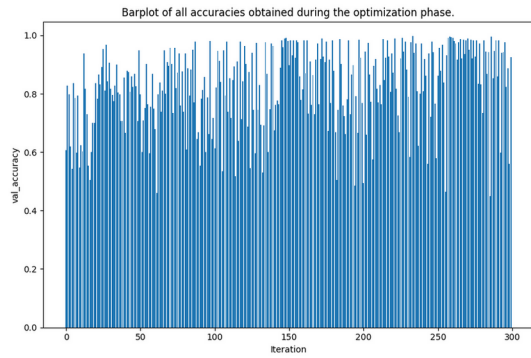
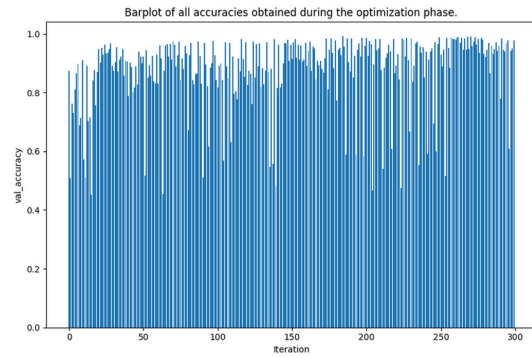
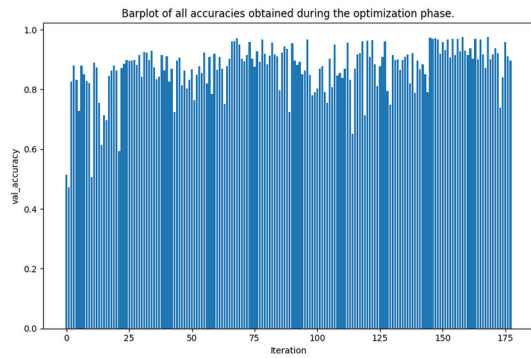
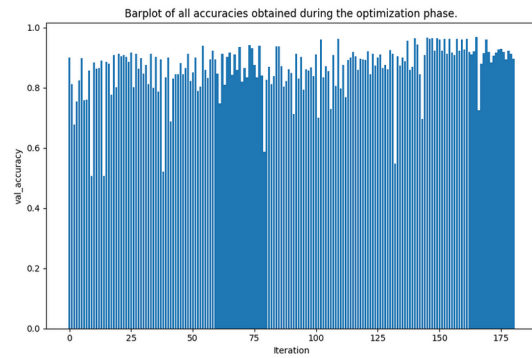
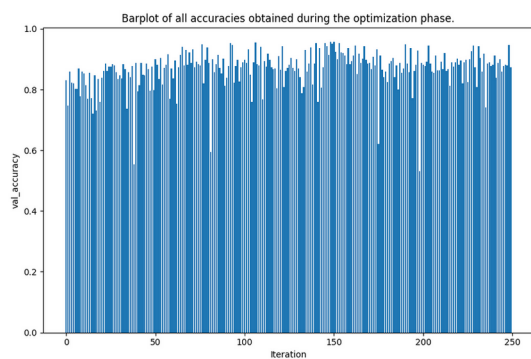
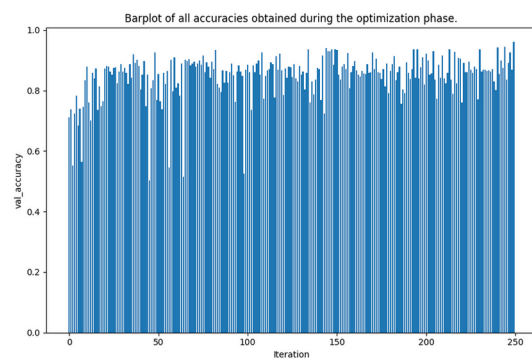
The bar-plots are attached first, but both the bar-plots and scatter-plots represent the same information.

## A.2.1 Survey validation bar-plots

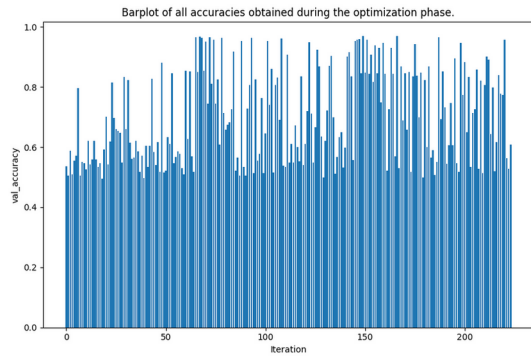


**C10****C15****C25****C50****C75****C100**

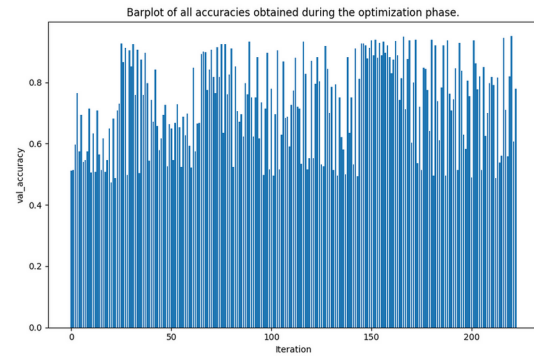


**E10****E15****E25****E50****E75****E100**

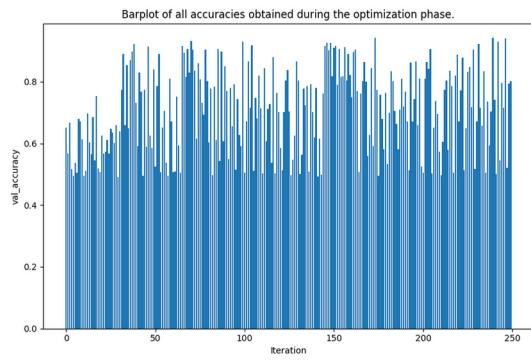
## F25



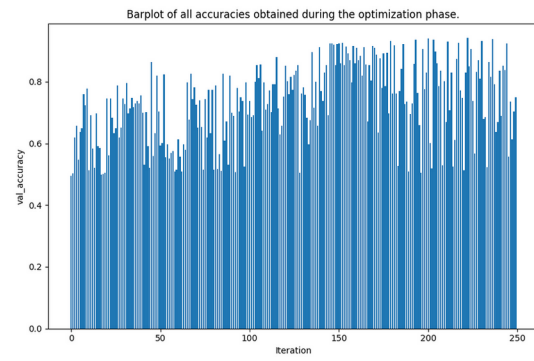
## F50



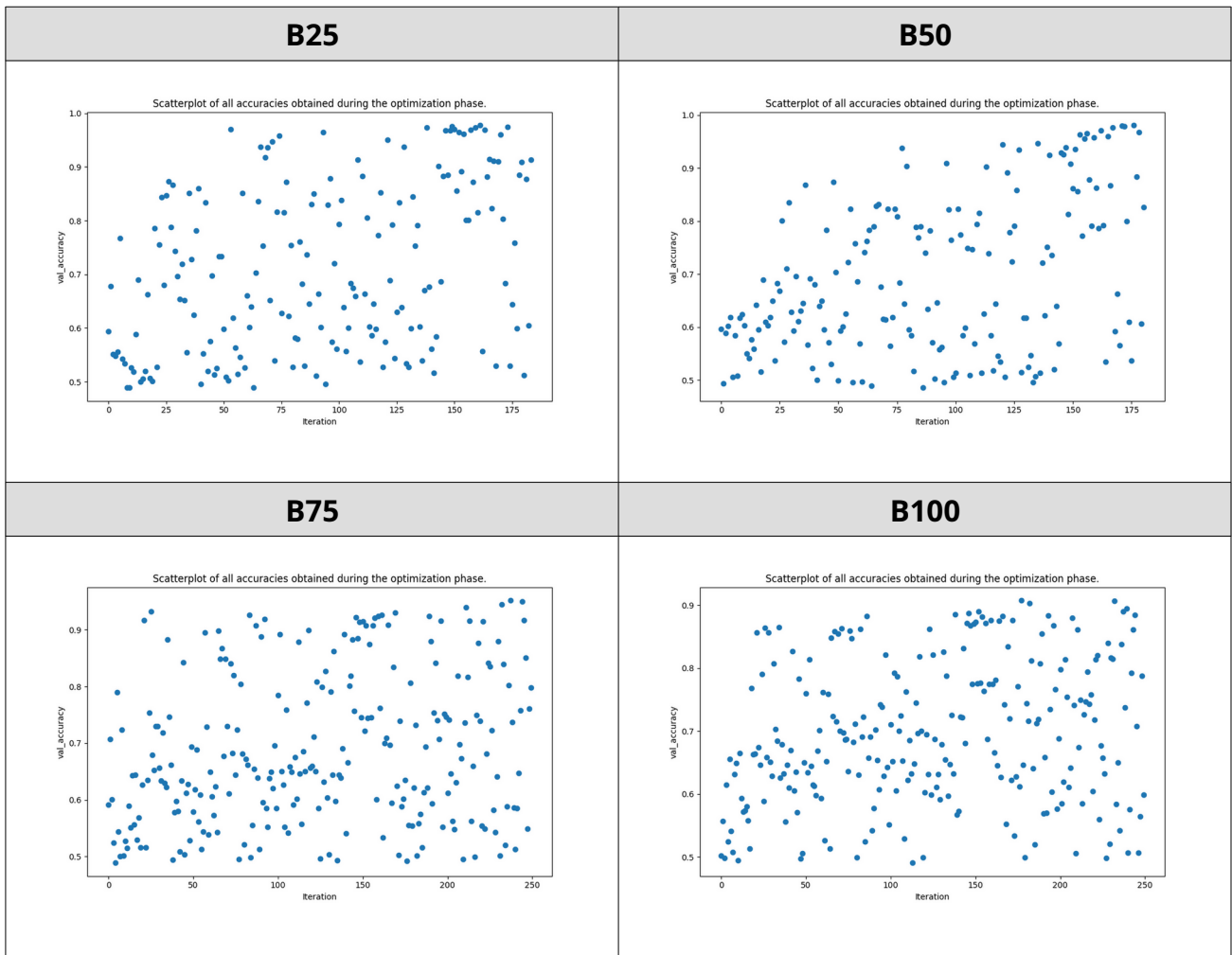
## F75

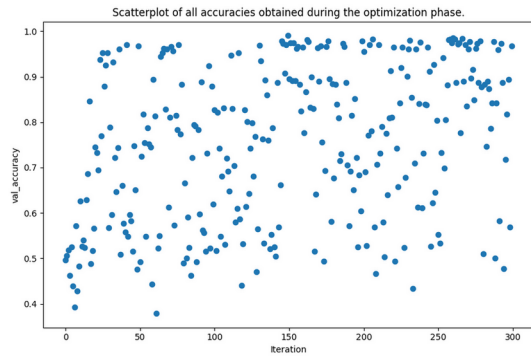
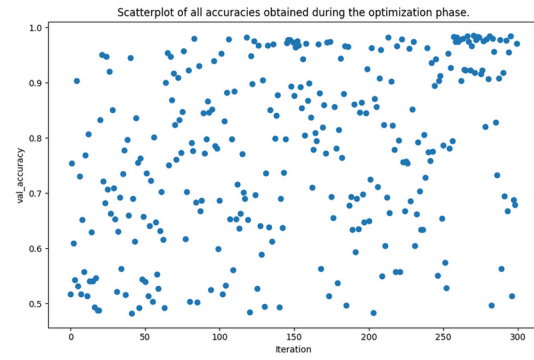
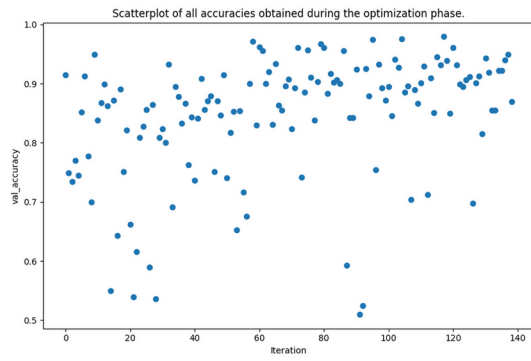
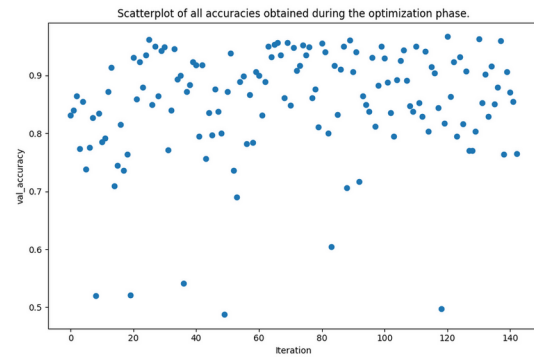
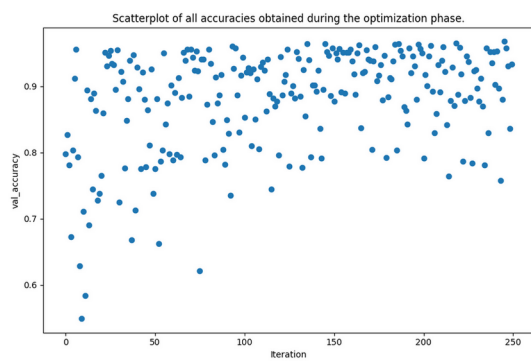
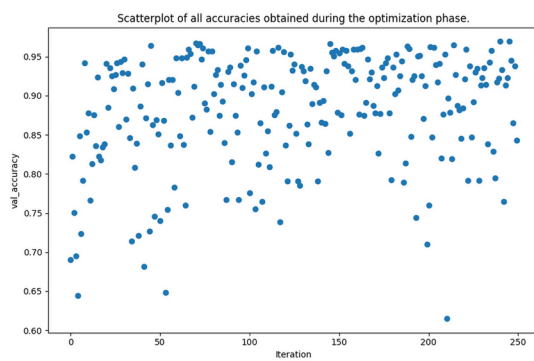


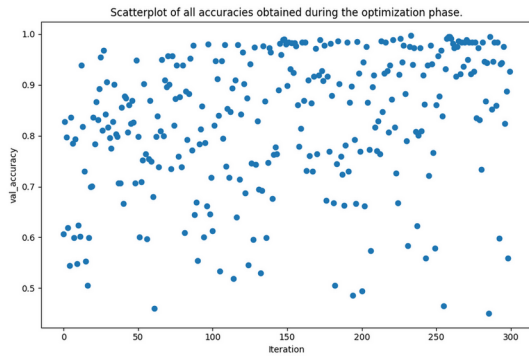
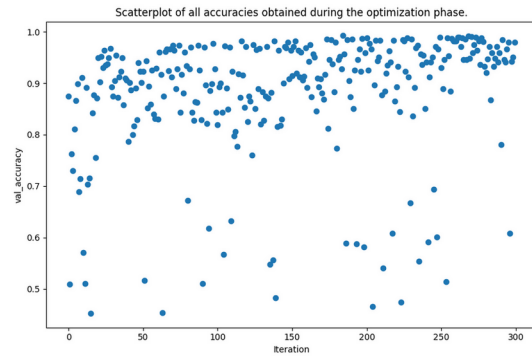
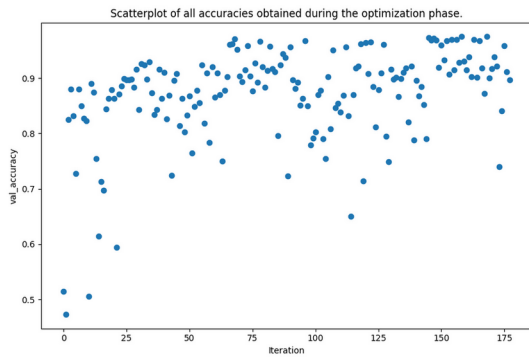
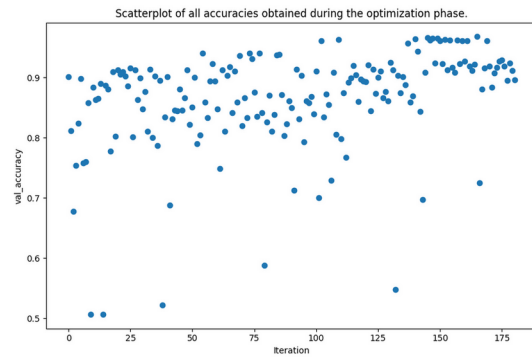
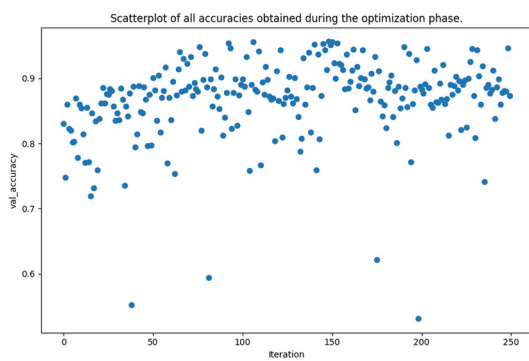
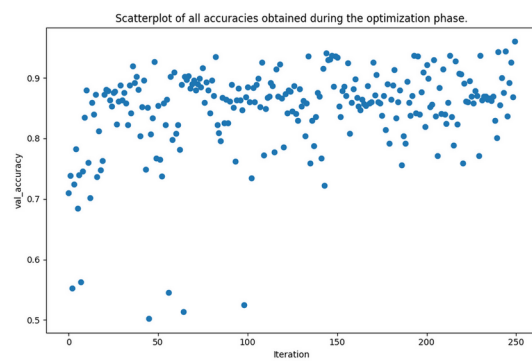
## F100

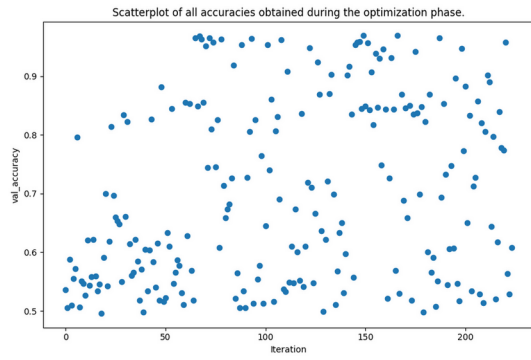
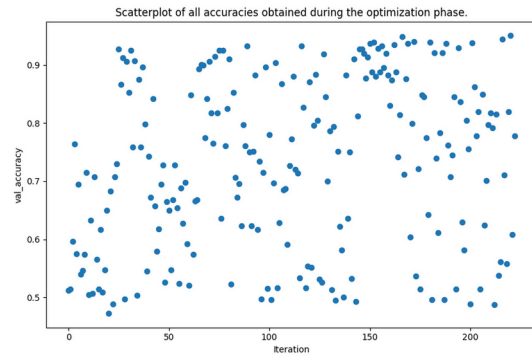
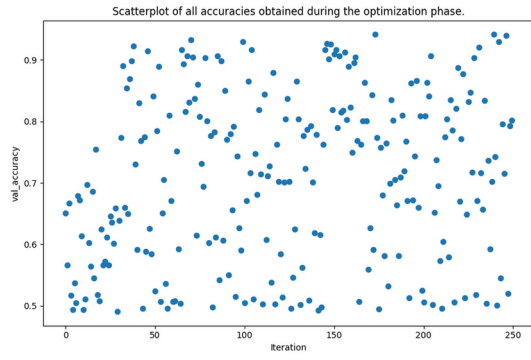


## A.2.2 Survey validation scatter-plots



**C10****C15****C25****C50****C75****C100**

**E10****E15****E25****E50****E75****E100**

**F25****F50****F75****F100**