## Remove peak from input



Figure: Histogram showing $m_{t}$ of events having at least 1.5 GeV difference to the mean

## Performance with removed peak

| method | mean absolute difference | sd of abs. difference |
| :---: | :---: | :---: |
| AdaBoostRegressor | 4.9756 | 4.2130 |
| NN | 4.6451 | 3.9294 |
| always the mean | 4.6730 | 3.7618 |

Possibly some potential for early stopping the NN because the validation loss starts to increase at some point in training

## Reduce peak in input



Figure: Histogram showing $m_{t}$ of events having at least 2 GeV difference to the mean and $1 \%$ of the remaining events

## Performance with reduced peak

| method | mean absolute difference | sd of abs. difference |
| :---: | :---: | :---: |
| AdaBoostRegressor | 4.6830 | 3.7100 |
| NN | 4.7408 | 4.0060 |
| always the mean | 4.4119 | 3.7618 |

## Use multiple masses



Figure: Histogram showing $m_{t}$ of events from multiple simulations with $m_{t} \in\{140,145, \ldots, 200\}$. Countet masses differ by at least 1.5 GeV from the mean

## Performance with multiple masses

| method | mean absolute difference | sd of abs. difference |
| :---: | :---: | :---: |
| AdaBoostRegressor | 15.6931 | 9.7363 |
| NN | 15.8156 | 10.0516 |
| always the mean | 16.0350 | 9.7038 |

