## Supplementary materials

Table S1. Model Training

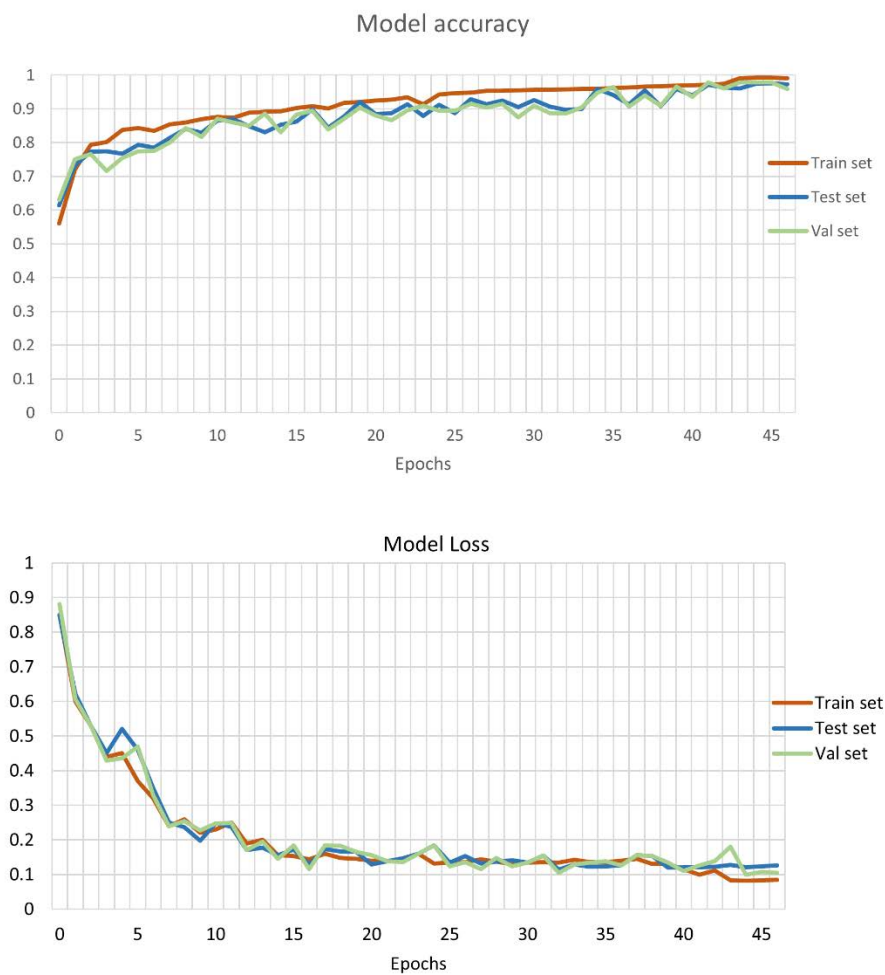| Hyperparameter | Value (range) | Comments |
|---|---|---|
| Training epochs | 46 (early stopping) | 17.5h (192h) |
| Batch size | 8 | – |
| Learning rate | $1\times10^{-3} \rightarrow 1\times10^{-5}$ | Reduce learning rate when validation loss has stopped improving |
| Optimizer | Adam | – |
| Loss function | Multiclass Cross Entropy | – |
| GPU | Nvidia A100 | – |



*Figure S1. Model evaluation metrics.*