

Conclusion

- F_1 -Score: 98.96%

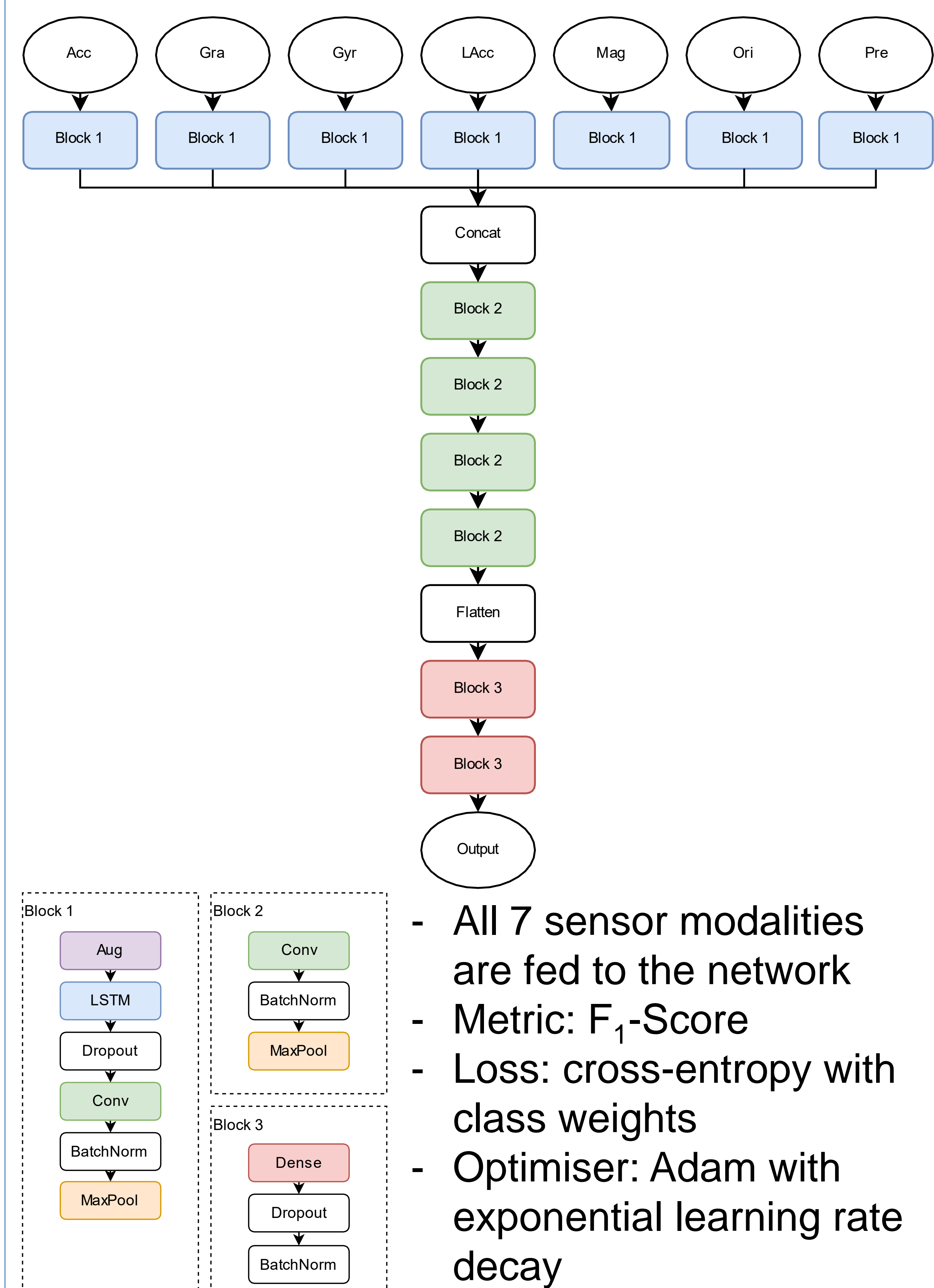
Introduction

- SHL Challenge_[1]: Classifying 8 modes of transportation on 4 different sensor locations using the SHL dataset_[2]
- Team: 103114102106_{|8}

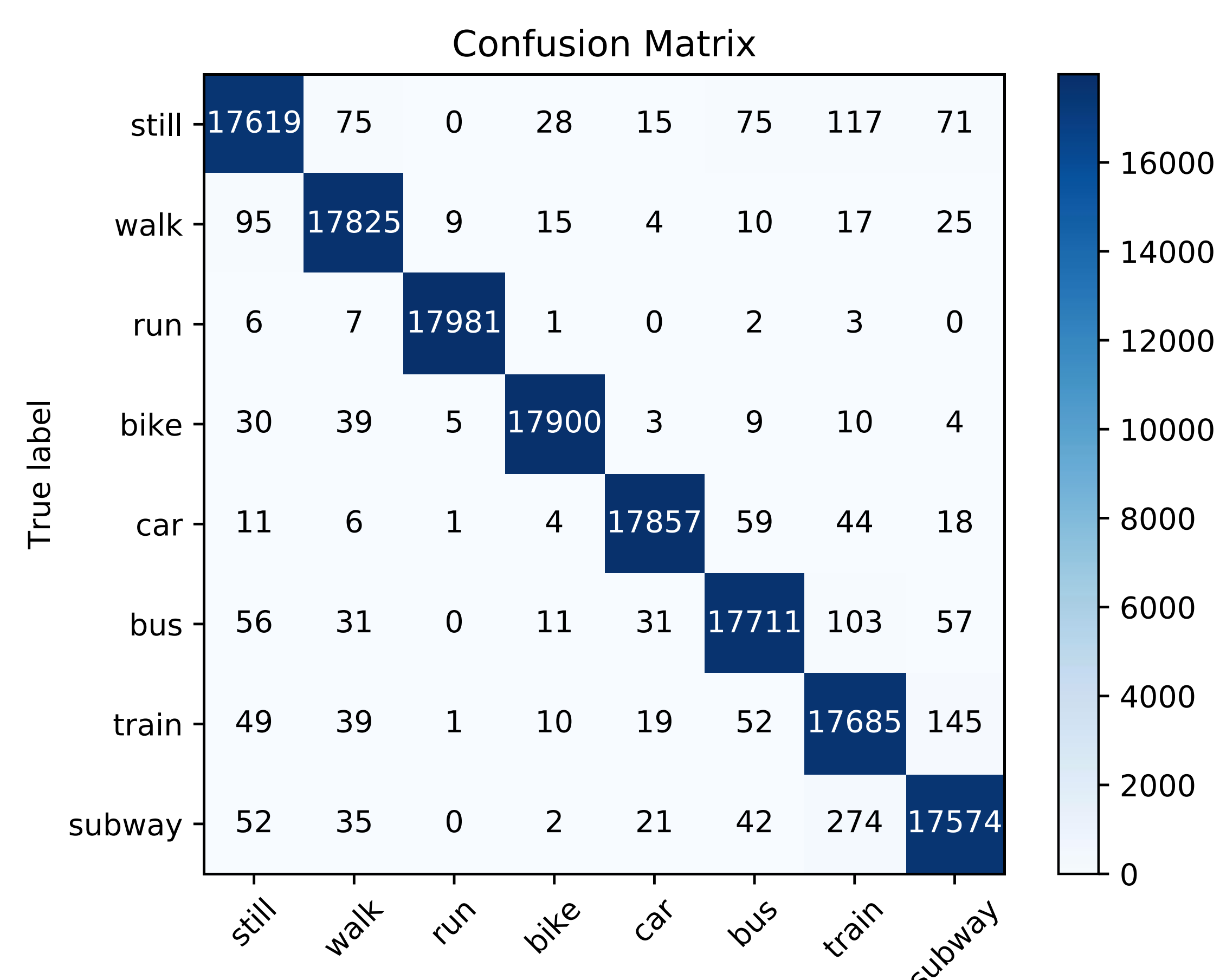
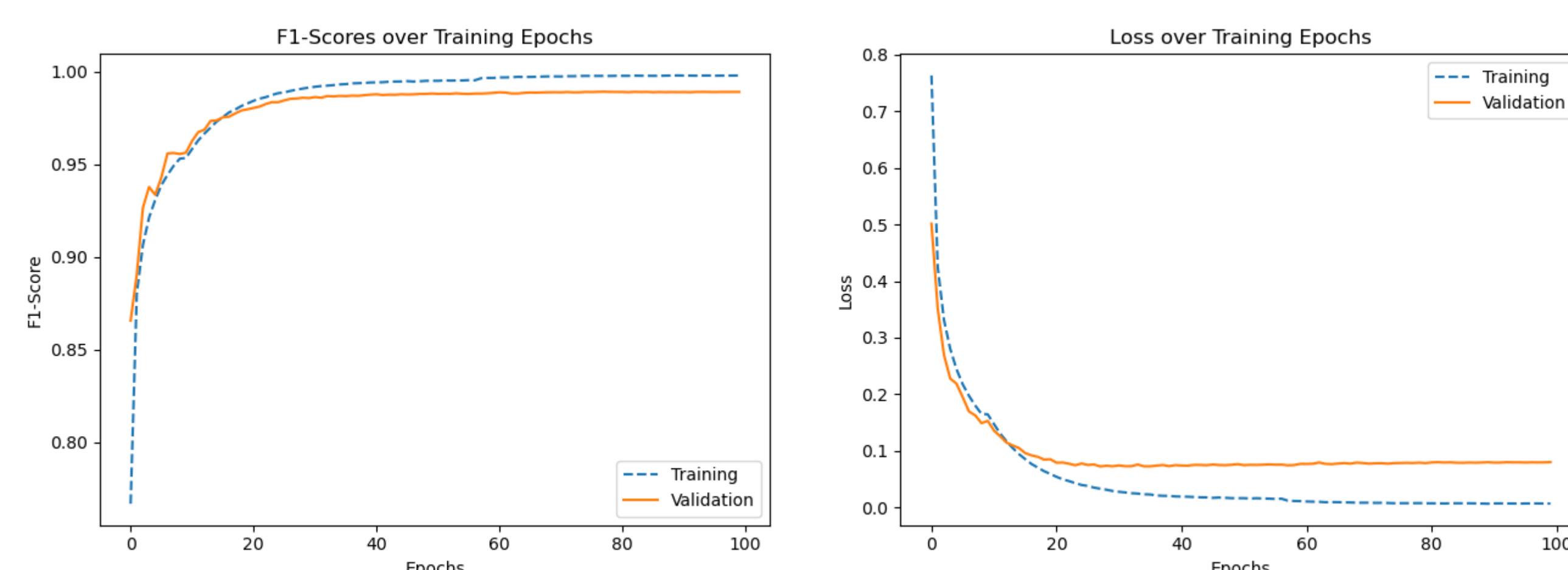
Preprocessing

- Majority vote for label
- Stratified split (75/15/10)
- Balancing by deleting/copying samples
- Standard scaling
- Augmentation by oversampling and subsampling subwindows (on-the-fly)

Network



Results



- Best class: Bike
- Worst class: Subway

Future Work

- Most potential for improvements in classes *still*, *bus*, *train*, *subway*
- Analysing the noise using the samples of class *still*
- Analysing the false classified samples

References

- [1] H. Gjoreski, M. Ciliberto, L. Wang, F. J. Ordonez Morales, S. Mekki, S. Valentin, and D. Roggen. 2018. The university of sussex-huawei locomotion and transportation dataset for multimodal analytics with mobile devices. *IEEE Access* 6 (23 July 2018), 42592–42604
- [2] L. Wang, H. Gjoreski, M. Ciliberto, S. Mekki, S. Valentin, and D. Roggen. 2019. Enabling Reproducible Research in Sensor-Based Transportation Mode Recognition With the Sussex-Huawei Dataset. *IEEE Access* 7 (2019), 10870–10891. <https://doi.org/10.1109/ACCESS.2019.2890793>

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