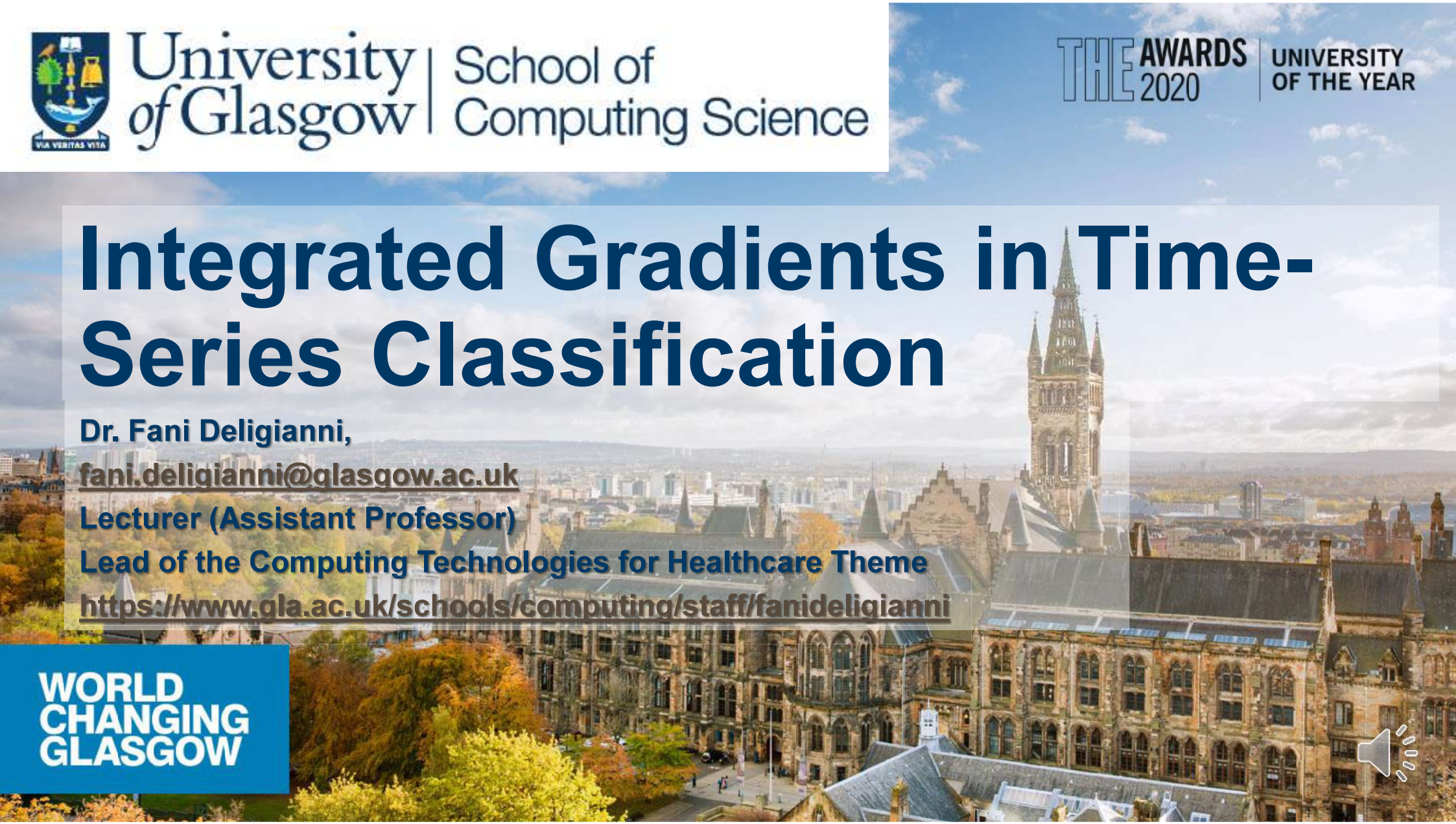
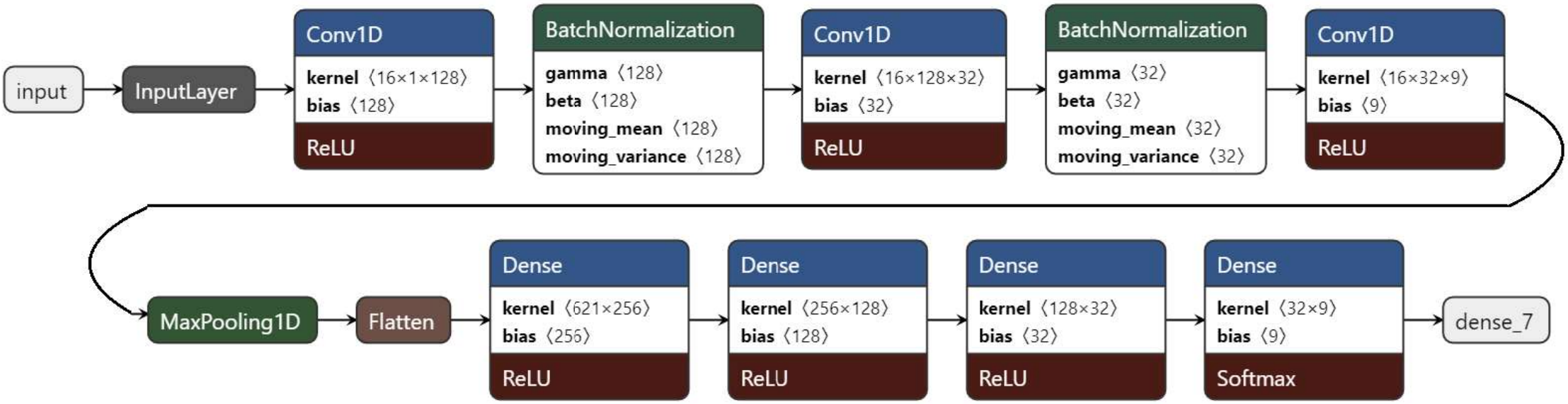


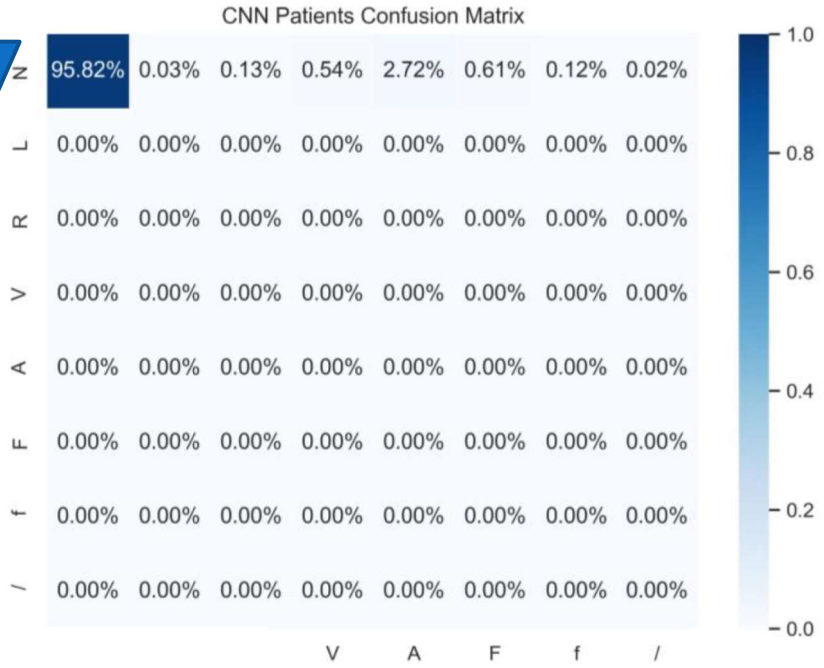
Integrated Gradients in Time-Series Classification

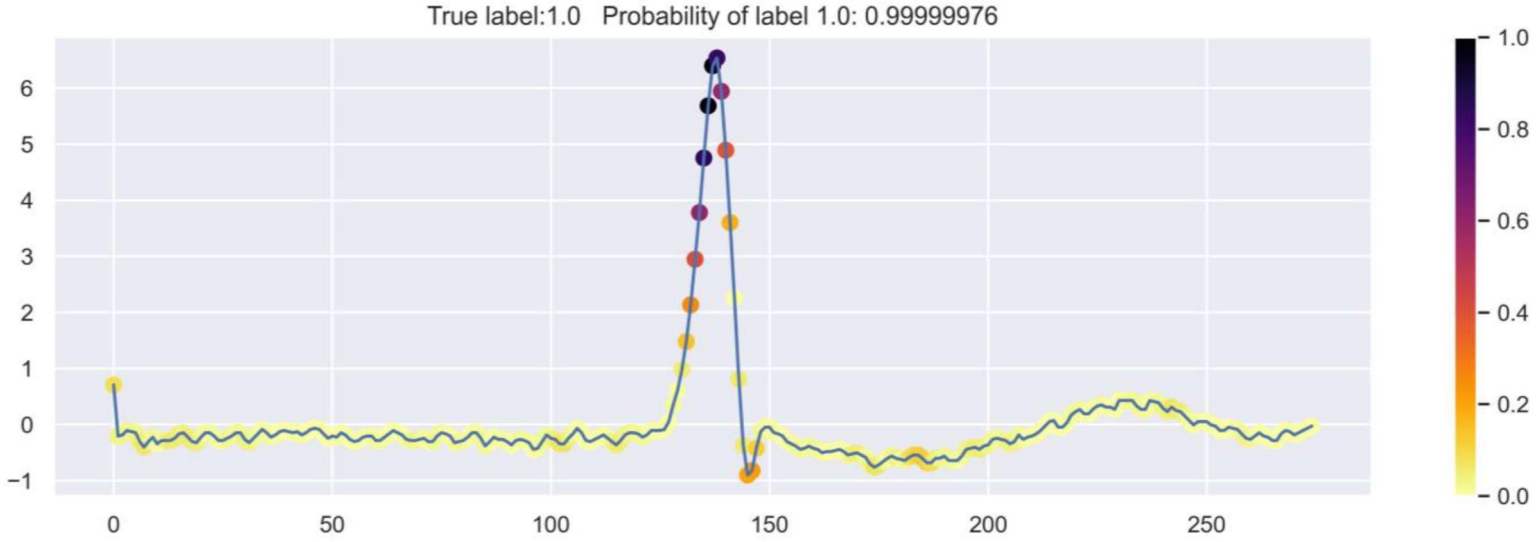
Dr. Fani Deligianni,
fani.deligianni@glasgow.ac.uk
Lecturer (Assistant Professor)
Lead of the Computing Technologies for Healthcare Theme
https://www.gla.ac.uk/schools/computing/staff/fanideligianni

Integrated Gradients for CNN

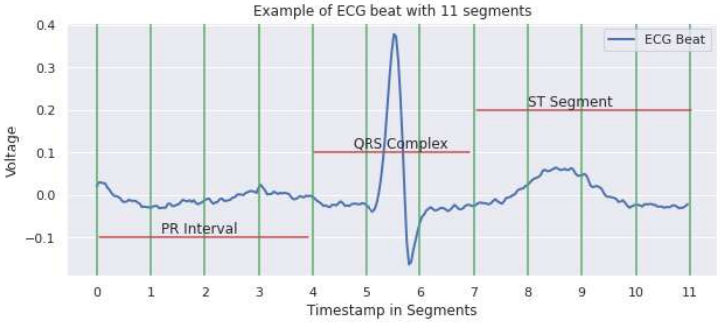


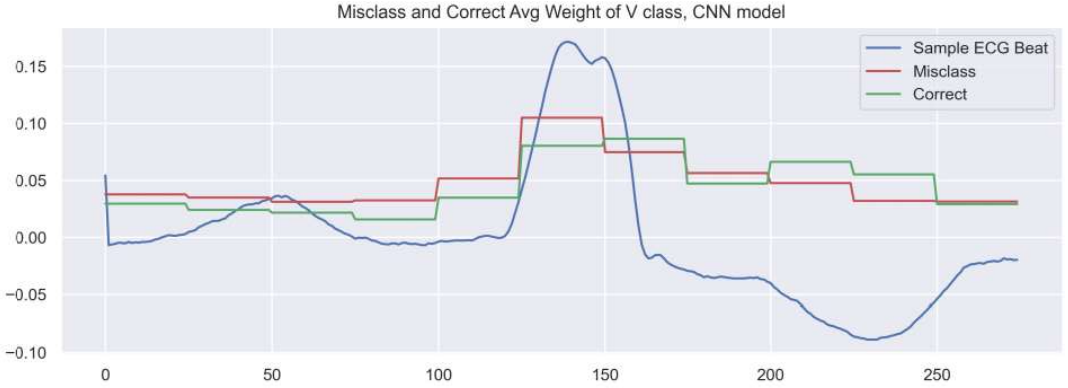
Integrated Gradients Explanations

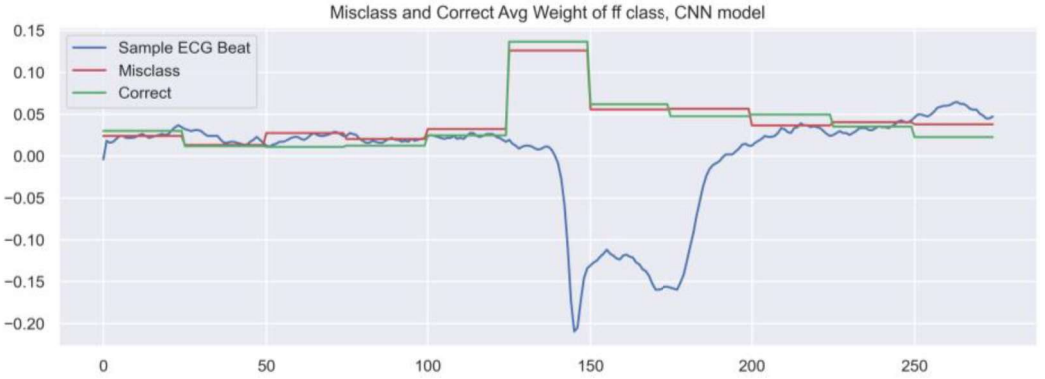


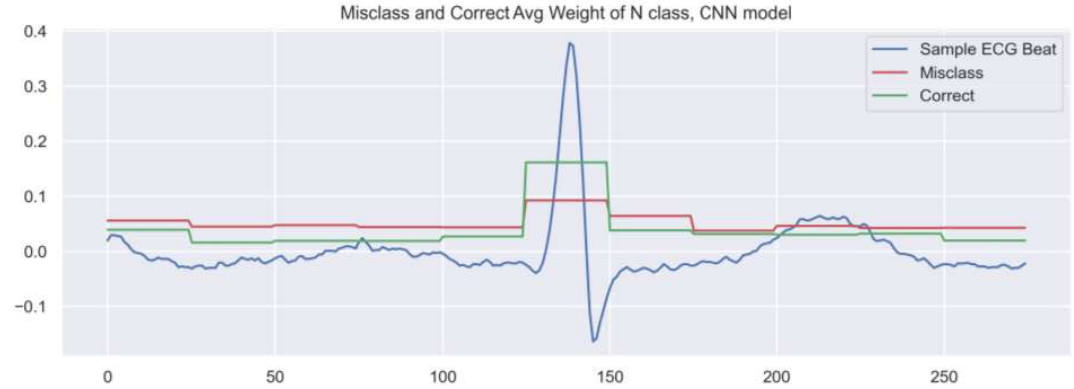


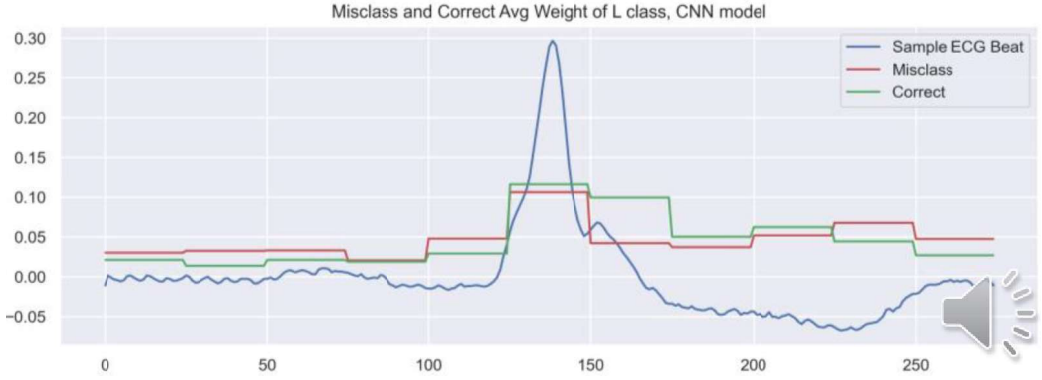
Average Explanations per Class



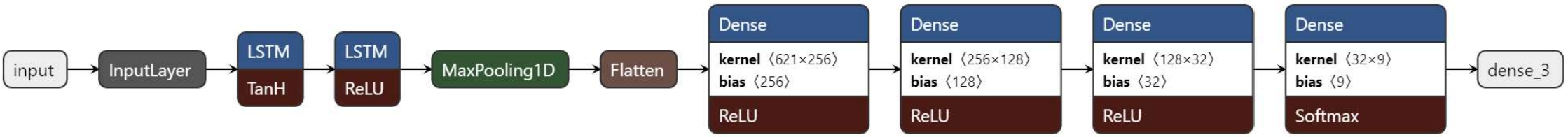




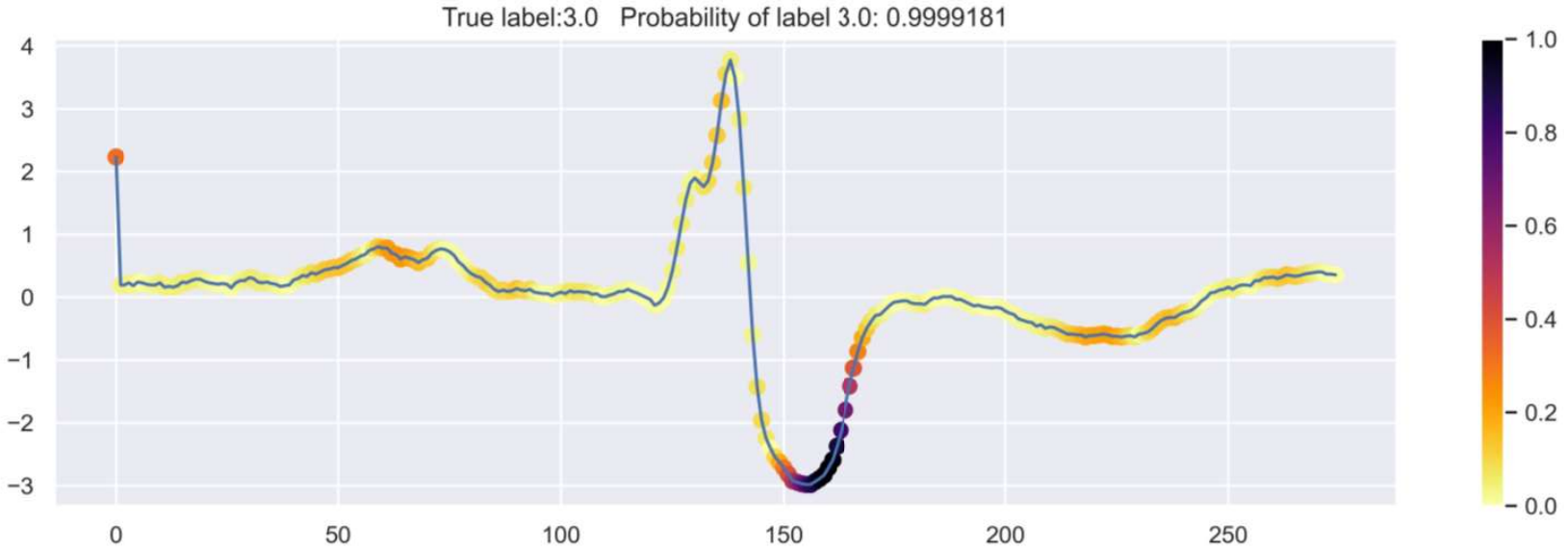




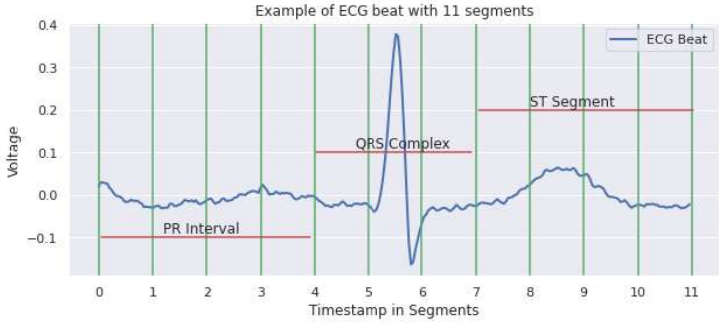
Integrated Gradients for LSTM

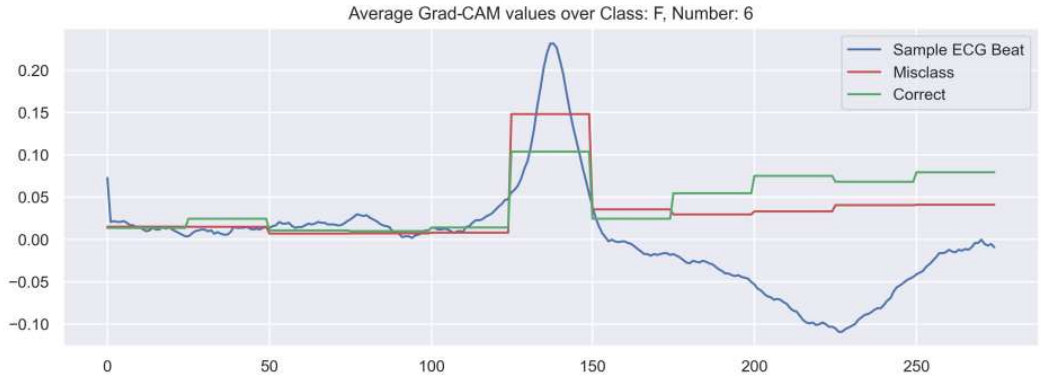


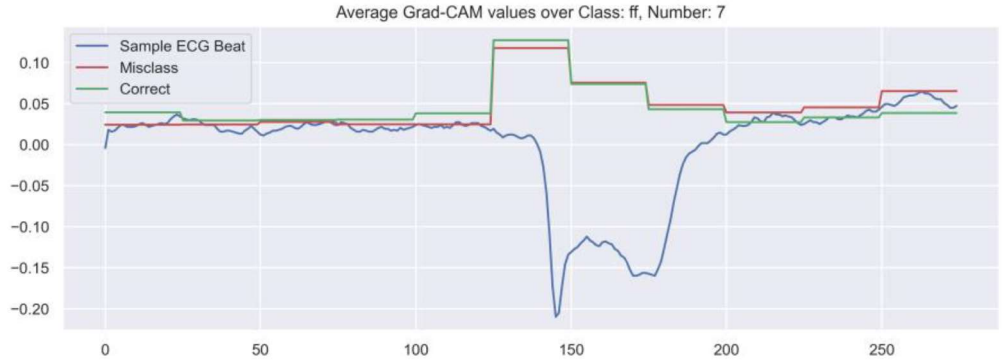
Integrated Gradients - LSTM

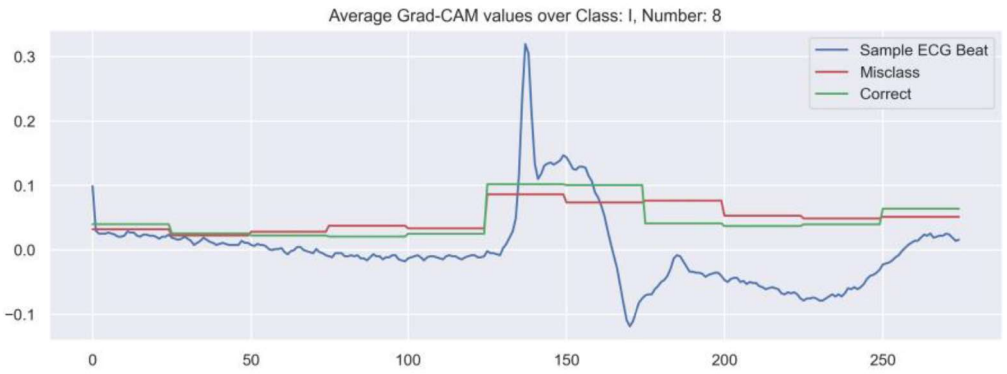


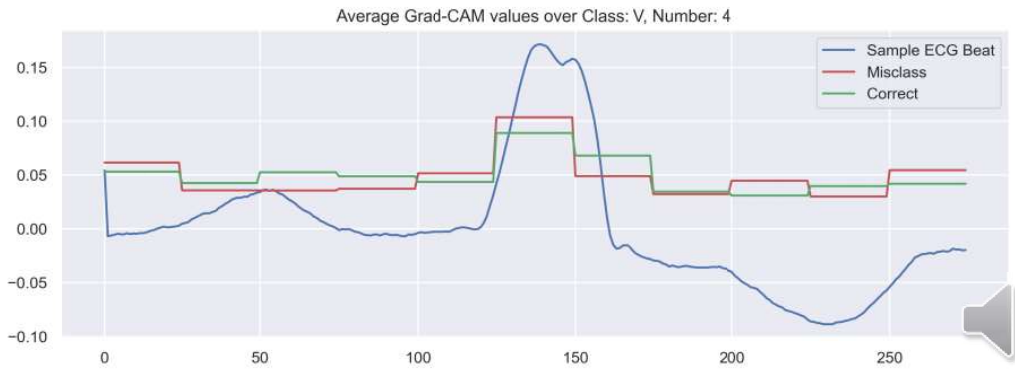
Average Explanations per Class











Summary

- Integrated gradients applied successfully in CNN and LSTM models for ECG classification
- Similar to image classification domain we used zero as a baseline

References

- Sundararajan et al. ‘Axiomatic Attribution for Deep Networks’, ICML, 2017.
- Klaise et al. ‘Alibi Explain: Algorithms for Explaining Machine Learning Models’, Journal of Machine Learning Research, 2021.