

GPU-accelerated Personalisation of Automatic Speech Recognition for Electrolarynx Speakers

N8CIR Summer Internship 2026

Echo Garratt

edgarratt1@sheffield.ac.uk

University of Sheffield

Supervisors: Dr Ning Ma Edwin Brown

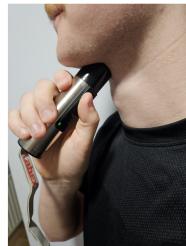
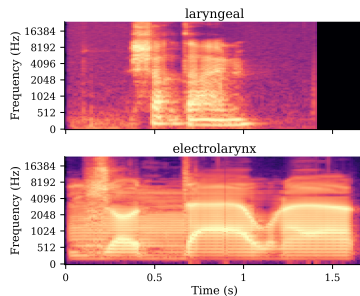


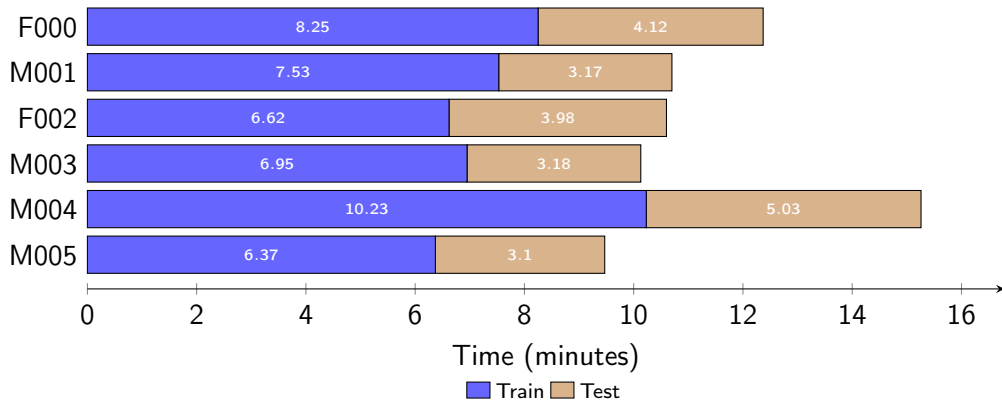
University of
Sheffield

Key Question

How do we improve computer recognition of Electrolarynx speech?

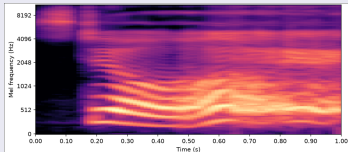
- Electrolarynx (EL)
- Automatic Speech Recognition (ASR)
- Prior work



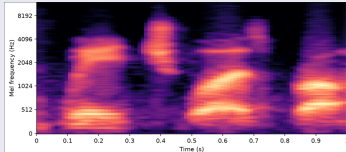


Two-step tuning

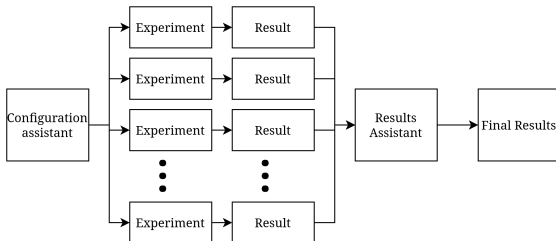
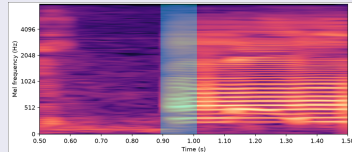
TransformerTTS



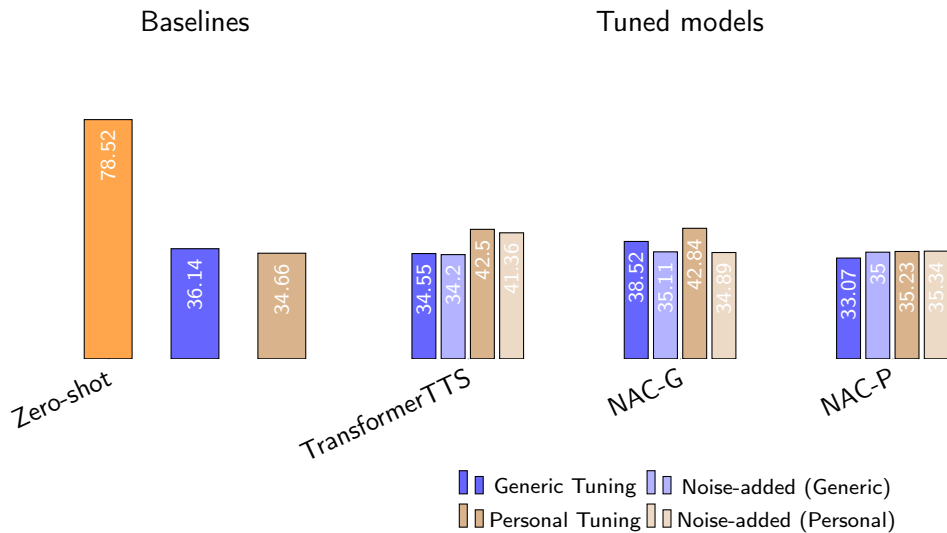
NAC-based TTS

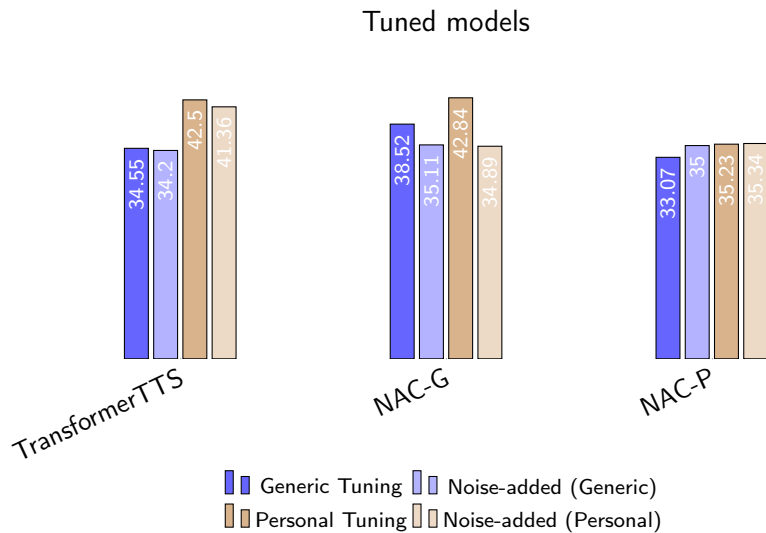


Personalised Noise



Results





Thank you!

Questions?