Vasu Mehra

Data Scientist II, Meesho | Speech & Language

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Work Experience

Data Scientist II | Meesho [Jan '26 – Present]

- Fine-tuned IndicConformer for Hindi ASR on production call audio: v1 on Devanagari script, v2 extended to code-mixed Hindi–English speech.
- Moved ASR inference to TensorRT (FP32), serving 30 RPS at p90 100 ms / p99 200 ms latency and cutting serving cost by 60%.
- Developed an XGBoost model ranking sellers by conversion affinity and scoring call slots hour by hour, with an explore–exploit policy for cold-start sellers; reduced outbound calling cost by 50%.

Data Scientist I | Meesho [Jul '24 – Dec '25]

- Fine-tuned XTTS for Malayalam, Telugu, and Tamil text-to-speech, covering languages with substantially less available training audio than Hindi or English; output quality assessed by human auditors.
- Built a fine-tuned Llama 3.2 3B Instruct model that simulates user behaviour on calls, letting the team evaluate prompts and conversation flows without waiting on live traffic.

ML and Signal Processing Intern | AI Health Highway Pvt. Ltd. [May '23 – Jul '23]

- Surveyed and replicated state-of-the-art lung sound classification architectures (CNN, RNN) across mel-spectrogram and MFCC features; this work became the basis of the M.Tech thesis below.

Software Developer | GlobalLogic India Pvt. Ltd. [Nov '20 – Jul '22]

- Migrated an insurance platform from VisualBasic to VB.Net across General Liability, Workers' Compensation, and Property lines of business.
- Built an internal query tool over the central database that cut query resolution time by 70%.

Education

M.Tech, Computer Science and Automation | IISc Bengaluru [2022 – 2024]

- Thesis: *Lung Sound Classification using Light-Weight Architectures*, advised by Prof. Siddharth Barman, co-advised by Prof. Prasanta Kumar Ghosh, in collaboration with AI Health Highway Pvt. Ltd.
- Compared light-weight CNNs over mel-spectrogram and MFCC features against wav2vec 2.0 variants pre-trained on heart and lung sounds; compact CNNs reached 78.7% on four-class adventitious sound detection, ahead of every wav2vec 2.0 configuration tested.

B.Tech, Information Technology | JSS Academy of Technical Education [2016 – 2020]

Publications

- Mehra, Vasu, and Dhiraj Pandey. "Assistive Technology-Based Solution for Hearing Impairment Using Smartphones." *International Journal of Software Innovation* 10(1), 2022, pp. 1–17.
- Mehra, Vasu, et al. "Technological Aids for Deaf and Mute in The Modern World." *Recent Patents on Engineering* 15(6), 2021.

Awards & Honours

- **Graduate Aptitude Test in Engineering (GATE):** All India Rank 90, 99.98 percentile.
- **Reliance Foundation Scholar:** among the top 100 candidates selected across India for postgraduate study.