Arindam Ghosh

+1 412-853-3499 arindam.gm@gmail.com LinkedIn, Google Scholar

EDUCATION

Carnegie Mellon University, Pittsburgh, USA Jan 2019 – Dec 2019
- MS, Electrical and Computer Engineering
- Focus: Machine Learning, Deep Learning, Speech Recognition, NLP, Probabilistic Graphical Models, Advanced Probability and Statistics.

National Institute of Technology Durgapur, Durgapur, India Jul 2009 – May 2013
- BTech, Electronics and Communication Engineering

EXPERIENCE

3M (Solventum) Health, Pittsburgh, USA
Research Scientist, Machine Learning for Speech and NLU Jun 2020 – present
- Self-supervised learning (SSL) for speech; transducer (RNN-T) based ASR models; end-to-end joint speaker-role prediction and ASR; confidence calibration of neural networks; low-resource low-footprint wake-word detection; summarization of doctor-patient conversations.

Carnegie Mellon University, Pittsburgh, USA
Research Assistant (to Prof. Ian Lane) Jan 2020 – May 2020
- Benchmarking performance of Kaldi and wav2letter recipes on the SwitchBoard corpus.

Research Assistant (to Prof. Osman Yagan) May 2019 – Aug 2019
- Time-series Forecasting for Personalized Product Promotions (ThaiBev Restaurants). Used ARIMA and LSTM based models for prediction of expected revenue from different coupons for a user.

Centre for Development of Telecommunication, Bangalore, India Aug 2013 – Dec 2018
Senior Research Engineer
- Prediction of Wireless Network Coverage under Spatially Correlated Interference. Proposed the mixture-based mathematical framework for modeling correlated interference, and applied it to derive the outage probability of MRC receivers. Both works were published in the journal *IEEE Comm. Letters*

PAPERS

Machine Learning
- **A. Ghosh**, T. Schaaf, and M. Gormley. "Adafocal: Calibration-aware adaptive focal loss." Advances in Neural Information Processing Systems 35 (2022).
- **A. Ghosh**, M. Fuhs, D. Bagchi, B. Farahani, M. Woszczyna, (2022) Low-resource Low-footprint Wake-word Detection using Knowledge Distillation. Proc. Interspeech 2022.
- Kim, B., **Ghosh, A.**, Fuhs, M.C., Chowdhury, A., Bagchi, D., Woszczyna, M. (2025) A Hybrid Approach to Combining Role Diarization with ASR for Professional Conversations. Proc. Interspeech 2025.
- L. Zhang, R. Negrinho, **A. Ghosh**, V. Jagannathan, H. Hassanzadeh, T. Schaaf, and M. R. Gormley. "Leveraging Pretrained Models for Automatic Summarization of Doctor-Patient Conversations." In Findings of the Association for Computational Linguistics: EMNLP 2021.
- **Ghosh, A.**, Fuhs, M., Kim, B., Chowdhury, A., & Woszczyna, M. (2025). ASR-Guided Speaker-Role Diarization and Diarization-Guided ASR Decoding. arXiv preprint arXiv:2507.17765.

Wireless Communications
- **A. Ghosh**, "Mixture-Based Modeling of Spatially Correlated Interference in a Poisson Field of Interferers," in IEEE Communication Letters, Nov. 2017.
- **A. Ghosh** and H. S. Dhillon, "Performance Analysis of MRC Under Spatially Correlated Interference Using Mixture-Based Method," in IEEE Communication Letters, Nov. 2018.
- **A. Ghosh**, G. Ghatak, and A. Chandra, "SEP of dual-ring star-QAM over FSO channels with atmospheric turbulence," IEEE International Conference SPCOM, 2014.
- **A. Ghosh**, J-W. Lee, and H-S. Cho, "Throughput and Energy Efficiency of a Cooperative Hybrid ARQ Protocol for Underwater Acoustic Sensor Networks," Sensors 13, no. 11, Nov 2013.

REVIEWER

NeurIPS (2025 – Present), **Interspeech** (2025 – Present), **ICASSP** (2025 – Present)