Pradyot Prakash

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Technology enthusiast with experience in research and engineering and expertise in system design and machine learning. Interests include Machine Learning and sensory AI-based challenges in healthcare.

EXPERIENCE

Meta (Facebook), *USA*   *Feb 2019 - Current*
Senior Machine Learning Engineer

Health Technology, Reality Labs   *Apr 2021 - Current*
- Reported to and worked with the Engineering Director of the team
- Researching novel physiological ML algorithms using PPG sensor data for improving human health outcomes; joined as an early member of the team
- Collaborated with medical doctors for data collection and device selections to use towards algorithm development
- Led the design of our ML training and inference pipelines – incorporating the use of HL7 FHIR schemas to work with sensitive health and sensor data
- Used parallelized-CUDA training with transformer based neural nets to build highly performant models for our tasks
- Worked with a cross functional team of 7+ Engineers and medical specialists to make progress towards our goals

Speech Recognition   *Feb 2019 - Mar 2021*
- Led the team to build Confidence Models for RNN-T and Hybrid ASR systems; deployed the on-device setup on Ray-ban Stories
- Trained distributed CTC based Acoustic Models for non-English languages – paper published in SLT 2021 (see below)
- Also worked with Neural Language Models for rescoring and better Pronunciation Modeling for entities

Professional work
- Interviewed over 40 candidates
- Mentored employees across the company as part of a Professional Mentorship Program

Facebook, *USA*   *Summer 2018*
Software Engineer Intern, Ads Ranking
- Worked on the dynamic prediction models used within Ads Product Ranking to improve the click-through-rate on the news feed
- One of the models I worked on got deployed to serve global ads traffic

Adobe Research Labs, *India*   *Summer 2016*
Research Intern
- Built an NLP model for predicting Brands' Personality along 5 personality dimensions using articles published by companies
- Outperformed state-of-the-art accuracies by 19% in the best case and patent approved

PUBLICATIONS AND PATENTS

- Benchmarking LF-MMI, CTC And RNN-T Criteria for Streaming ASR [SLT 2021]
- Utilizing lexical similarity between related, low-resource languages for pivot-based SMT [IJCNLP 2017]
- Scalable static hybridization methods for analysis of nonlinear systems [HSCC 2016]
- Predicting brand personality using textual content [Approved US Patent 11074595B2]
- Using Codes for Adversarially Robust Classifiers (Master's thesis) [2018]

EDUCATION

University of Wisconsin-Madison (UW-Madison), *Madison, WI, USA*   *Sep 2017 - Dec 2018*
MS in Computer Science (thesis on Adversarial ML Models)   4.0/4.0
Indian Institute of Technology Bombay (IIT Bombay), *Mumbai, India*   *Jul 2013 - May 2017*
B.Tech. with Honors in Computer Science and Engineering with Minor in Statistics   9.26/10

OTHER

- Secured All India Rank 55 in JEE Advanced out of 150000 and All India Rank 16 in JEE Main out of 1.5 million students   *2013*
- Department Academic Mentorship Program Head for CS and Institute Academic Mentor, IIT Bombay   *2016 - 2017*
- Head of the Web and Coding Club of IIT Bombay   *2015 - 2016*