New York, NY
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Makarand Parigi

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Experience

Machine Learning Engineer — **Nextdoor** — **May 2023 - Nov 2023**
Trust & Safety — New York, NY

- Led the development and deployment of an ML model to evaluate posts and comments for potential community guideline violations. This model served as a critical metric for monitoring violative content on the platform.
- Proactively addressed data quality challenges; proposed and executed plan to use GPT to enrich the training dataset, significantly improving model performance (+0.12 PR-AUC).

Machine Learning Engineer II — **Twitter** — **Aug 2021 - Feb 2023**
Trust & Safety - Abusive Interactions — New York, NY

- Led team of 3 developers to improve Abuse Detection model by incorporating media features, resulting in a 10% increase in model precision and my promotion to mid-level engineer.
- Conducted A/B experiments resulting in a 15% increase in remediation volume and addition of 2 tweet languages.
- Migrated tweet report ranking model to Google Cloud's Dataflow, leading to a 63% increase in report action rate and a decrease in model training time of 90%.
- Independently created an internal web tool to run our abuse detection model with sample inputs.
- Simplified training data generation with BigQuery and refactored TensorFlow model training code to reduce engineering time required for training new models.

Research Assistant — **University of Michigan Radiology** — **June 2020 - Dec 2020**
Deep Learning for MRI Reconstruction — Ann Arbor, MI

- Created novel deep learning architecture in PyTorch to "fill in the gaps" in undersampled brain MRI acquisitions. This allows faster scanning of patients with minimal loss in the accuracy of the output image. My method beats the baseline while using 50% fewer parameters.
- Adapting the U-net for Multi-coil MRI Reconstruction published as an extended abstract at the International Society for Magnetic Resonance in Medicine (ISMRM) 2021. Presented at Neuromatch 3.0, a neuroscience conference.

Teaching Assistant — **University of Michigan Computer Science** — **Jan 2018 - Apr 2021**
Ann Arbor, MI

- Courses: Programming Languages Theory, OOP and Data Structures in C++, Intro to Programming
- Led development of instructional materials for 1000+ students per semester. Hosted exam review sessions, taught discussion sections, delivered lectures, and assisted students in office hours.

Skills

- Languages: Python, SQL, C++, Haskell
- Technologies: TensorFlow/Keras, PyTorch, BigQuery, Apache Beam, Google Cloud (GCP), Databricks

Internships

Twitter - JVM Team — **Summer 2019**

- Developed Neuroevolution program to evolve a neural network to use as a heuristic for Method Inlining, a compiler optimization. Implemented for GraalVM's Java compiler. Presented at CGO 2020's Graal Workshop.

Amazon Music - Growth Engagement — **Summer 2018**

- Designed and implemented AWS architecture for marketing campaigns to send notifications into the web app.

Education

- **M.S. Computer Science,** University of Michigan. GPA: 3.64 — **2021**
- **B.S.E. Computer Science,** University of Michigan. GPA: 3.91 (Summa Cum Laude) — **2020**