Aman Choudhary

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https://amanchoudhary2020.github.io/portfolio/

Education

University of Michigan, Ann Arbor **August 2020 – May 2024**
Bachelor of Science in Engineering in Computer Science *GPA: 3.82/4*
Coursework: Operating Systems, Web Systems, Machine Learning, Computer Vision, Computer Security, Computer Architecture, Linear Algebra, Multivariable Calculus, Advanced Probability

Technical Skills

Programming Languages: C++, Python, Rust, JavaScript, Scala, MATLAB, SQL, Java, Swift, HTML/CSS
Libraries/Frameworks: (ML/AI) TensorFlow, Keras, scikit-learn, NLTK, PyTorch, OpenCV (Full Stack) React, Flask, Next.js, Node.js, Cordova
Software Development Tools: Git, Docker, AWS, Unix, NGINX, CI/CD, Apache, Hadoop

Work Experience

Deepgram, Inc. **May 2023 – August 2023**
Software Engineering Intern *San Francisco, CA*
- Created an automated CI/CD pipeline with GitHub Actions to run a suite of Rust tests against new releases of core automatic speech recognition (ASR) inference engine, radically increasing confidence in release process
- Expanded coverage of test suite by writing a Rust crate to catch statistical regressions in transcript quality, using an audio API server built with Flask, served by NGINX, and deployed on Docker to serve cached data for calculations
- Researched inference engine optimizations to speed up inference runtimes 1.3x with similar accuracy

Criteo Co. **May 2022 – August 2022**
Software Engineering Intern *Ann Arbor, MI*
- Developed a Spark pipeline written in Scala to improve monitoring of data quality of retail media advertising events, storing real-time updates in Hive databases and updating metrics dashboards
- Tuned Spark performance to optimize the run time of a suite of Spark jobs that process large-scale advertising event datasets on an hourly basis

Trashbots Co. **June 2021 – August 2021**
Software Engineering Intern *Austin, TX*
- Integrated new features on web-based application using JavaScript and Cordova to enable the platform to teach concepts such as looping and object-oriented programming
- Updated MicroBit-based robot compatibility for new firmware with C++ to ensure seamless compatibility between app and robot across product updates

Campus Involvement

Diagnostic Intelligence Augmented for Global Health (DIAG) **January 2023 – Present**
Data Engineering, Modeling, and AI Researcher
- Currently exploring deep convolutional neural networks for automatic classification of bladder cancer whole-slide images using the inception v3 architecture by Google

Michigan Hackers Team **August 2021 – Present**
Machine Learning Team Lead
- Leading team of 15 members on a text summarization project, using deep learning methods involving sequence-to-sequence modeling to summarize articles
- Create and teach presentations for 70+ members about fundamentals of machine learning

Predicting News Reader Feedback with Deep Learning **August 2021 – April 2022**
Undergraduate Research Opportunity Program (UROP) Researcher
- Performed linguistic analysis of questions and comments on social media posed to new stories, using deep learning to predict audience engagement on news articles using scraped social media data related to major news organizations

Projects

Search Engine: Built a scalable search engine using PageRank-based ranking system, Hadoop Streaming to create a segmented inverted index, and a distributed system for search
Operating System: Wrote a thread library, virtual memory pager, and networked file system with C++

Extra: Private Guitar Instructor, Mixing and Mastering