Looking for Full Time Software Engineering opportunities starting Jan. 2022

Ishaan Thakur

it233@cornell.edu • +1 (609) 325-6024 • ishaanthakur.github.io • ishaanthakur • ishaanthakur

Education

Cornell University College of Engineering — Ithaca, NY

M.Eng., *Electrical & Computer Engineering*, GPA 3.90 — **Feb. 2021 – Dec. 2021**

B.S., *Electrical & Computer Engg; Computer Science Minor* | Magna Cum Laude, GPA 3.78 — **Grad. Dec. 2020**

M.Eng. Thesis: Analysis of Metaheuristic Algorithms for Improving Performance of Deep Neural Networks

Relevant Courses: Algorithms, Systems Programming (TA), Datacenter Computing, Cloud Computing, Machine Learning, NLP, Computer Vision, Operating Systems, Networks, Embedded Operating Systems, Data Structures

Professional Experience

SoFi, Inc. — San Francisco, CA (Remote)

Software Engineering Intern - Lending Growth Team — **Jun. 2021 – Aug. 2021**

- Built, deployed and wrote unit & integration tests for a new Loans dashboard in React and TypeScript that includes a redesigned tools and learn section for easier product navigation.
- Incorporated a wrapper for Optimizely SDK to ensure routing to the new dashboard based on feature flags.
- Automated dependency updates for several lending projects, **saving 1k+ developer hours** annually.
- Integrated Datadog metrics in several lending services to provide better observability for engineers on-call.

On Pepper LLC — New York, NY (Remote)

Software Engineering Intern - Voice Experience Team — **May 2020 – Aug. 2020**

- Developed a chatbot using React, DialogFlow and MongoDB that **reduced average response time by 87%**; wrote its unit & integration tests and ran its A/B tests on 1000+ users for recording voice search engagement.
- Redesigned authentication service on the firm's asset management platform to allow integration with Auth0.
- Built Business Intelligence (BI) tool that leveraged ML and NLP to analyze firm's fund asset data.

ESnet, Lawrence Berkeley National Lab — Berkeley, CA

Software Engineering Intern - Scientific Network Team — **May 2019 – Aug. 2019**

- Implemented a network packet tracing dashboard for collecting service quality metrics, monitoring network security and allowing real time debugging on network packets, using Node.js, React and Cassandra.
- Improved High Touch Services for Network engineers using Node.js and React. **Impact: improved rendering speed by 10x; added support for significant data transfer (100 Gbps) and packet features filtering.**

Swarm Robotix LLC — Naperville, IL

Software Engineering Intern - Sensor Software & Controls Team — **May 2018 – Jun. 2018**

- Designed a localization system with Dynamic Window Approach for autonomous mobile robots in ROS using C++. **Successfully improved collision detection and avoidance by 67%.**

Project Highlights

Cloud-based IoT System for Mastitis Detection — **Apr. 2021 – May 2021**

- Built an IoT system in Python to concurrently monitor up to 200 simulated dairy farms, where the VMs at the edge issue email alerts via an Azure Function App when mastitis is detected among cows.
- Deployed a random forest classifier as an Azure Container Instance for batch inference on continuously streaming data, with response times consistently under 20 milliseconds.

Shopping Cart Service — **Mar. 2021**

- Implemented a shopping cart DHT (Distributed Hash Table) service in Java that lets client perform several operations to buy, list, update and checkout items via remote procedure calls.

Conversation Starter — **Nov. 2020 – Dec. 2020**

- Developed a chat backend REST API in Java capable of supporting text, image and video messages.
- Leveraged JPA CrudRepository and Hibernate ORM for implementing data persistence in MySQL.

Over-the-Air Radio Signal Classification — **Apr. 2020 – May 2020**

- Designed a 6-layer Residual Neural Network in PyTorch to classify time-series data, obtained from measuring signals with low-SNR, into one of 10 modulation types with 60% accuracy. Top 10% Kaggle submission.

Technical Skills, Honors & Involvement

Languages: Proficient: Java, Python, C/C++ | Familiar: SQL, Kotlin, JavaScript, TypeScript, HTML, CSS, LaTeX

Tools: MongoDB, MySQL, Node.js, React, Azure, Docker, Git, Gradle, Ansible, Data/ML/NLP Python Libraries

Honors: Dean's List | 2nd Place, Cornell Robotics Competition (2019) | 1st Place, ECE Design Competition (2018)

Involvement: Intelligent Physical Systems Head T.A. | CS 4414 (Systems Programming) Staff | Outreach, ACSU