Samrat Sahoo

U.S Citizen | 972-971-9060 | samratsahoo@gatech.edu | linkedin.com/in/samratsahoo/ | github.com/SamratSahoo

Education

Georgia Institute of Technology, *B.S. Computer Science* May 2025 | Atlanta, GA
GPA: 4.0/4.0 | **Awards:** Bessemer Fellow, Faculty Honors, Eagle Scout
Coursework: Data Structures & Algorithms, Systems and Networks, Computer Organization, Software Engineering Design

Experience

Cruise Automation, *Software Engineering Intern* May 2023 – July 2023 | San Francisco, CA
- Refactored the Sim Platform's access control system, saving 100+ hours of engineering time per month (PostgreSQL/OPA)
- Engineered widgets displaying exit codes, execution cost, and test size, saving 1000s of dollars per month (Kubernetes/Pulumi)
- Extended simulation platform's search engine to drive additional insights into test age information (ElasticSearch/BigQuery)

Visor, *Software Engineering Intern* January 2023 – May 2023 | New York City, NY
- Redeveloped the HubSpot chat integration for better user experiences for 1000+ users (Vue.js/HubSpot API)
- Built the settings integrations page from scratch for Salesforce, HubSpot, & Atlassian (HubSpot/Salesforce/Atlassian APIs)
- Redesigned the Visor home page, optimizing for real-time filtering and data via graph manipulation (CloudstoreDB)

Fidelity Investments, *Software Engineering Intern* June 2022 – August 2022 | Westlake, TX
- Implemented a data interaction application (Vue.js/Express.js/AWS) for data, saving 100+ hours of manual data mining
- Delivered automation APIs (GraphQL/Python) to 100 teams to interact with legacy data engineering infrastructure
- Deployed data mining applications to 3000+ developers (Jenkins/ uDeploy), improving integration testing time by 50%
- Built modern GraphQL API layers on top of legacy SOAP APIs for database operations, reducing development time by 66%

Roboflow (YC S20), *Software Engineering Intern* March 2021 – August 2021 | Des Moines, IA
- Created the training procedure for the Roboflow classification network (PyTorch/Docker) used by 3 enterprise users
- Initiated development for the Roboflow SDK (Python) enabling better workflow integrations for 100,000+ developers
- Roboflow Python package integrated with YOLOv5 (25,000 stars on Github), increasing new users by 1000 per month
- Adapted computer vision models like YOLOX and MobileNetV2 (C++/Python) for Roboflow (1000+ monthly users)

Research

Georgia Tech Financial Services Innovation Lab, *Research Assistant* December 2021 – Present
- Designed and developed a large-scale database (Vue.js/Nuxt.js/Celery/Python) for NFT counterfeit detection on AWS (SQS)
- Developed a simulation parser and platform for running tests on distributed, decentralized nodes at scale (Docker/GoLang)
- Building a privacy-centered federated learning protocol for collaborative machine learning (GoLang/PostgreSQL/Python/LibP2P)

Exoskeleton and Prosthetic Intelligent Controls Lab, *Research Intern* August 2021 – December 2021
- Generated torque profile and calculated EMG processing delay for data verification on raw EMG data (MATLAB/Python)
- Formed an electromyography dataset of 200,000 pieces of joint load data to be used in post-experiment data analysis

Projects

Universal NFT Vector Database, *A Large Scale Vector Database for NFT Similarity Matching*
- Developed public visualization and similarity matching APIs (Flask/Google Cloud Run) using RegNetY-080 embeddings
- Devised a public graphical user interface (Vue.js/Nuxt.js/MongoDB) for easy interaction with vector database data
- Integrated task queue structure (AWS Simple Queue Service/Celery) for horizontal scaling and hardware agnosticism

Scatter Protocol, *An incentivized, privacy-centered federated learning protocol for collaborative machine learning*
- Developed and deployed secure smart contracts to Ethereum for incentivized tokens (Solidity/Go-Ethereum)
- Created a decentralized, peer2peer node system to split machine learning loads across a network (GoLang/LibP2P)
- Standardized model format for interoperability between machines for easier model processing (ONNX/Docker)

Leadership

Bits of Good, *Director of Engineering* September 2021 – Present | Atlanta, GA
- Led a team of developers and designers using agile methodology to create a mobile app (React Native) for 800 users
- Connected over 1400 developers through creating the National Hack4Impact Portal (React.js/Next.js/Azure/Vercel)
- Began the Infrastructure Labs team, focusing on building scaleable systems to accelerate developer productivity

Skills

Languages & Frameworks: Python, Javascript, Java, Solidity, Typescript, GoLang, HTML, Chainlink, VueJS, NuxtJS, NextJS, ExpressJS, Flask, ReactJS, PyTorch, MongoDB, Graph Protocol, Tensorflow, OpenCV, React Native, Assembly, C, LibP2P

Developer Tools & Libraries: Git, Amazon Web Services (Simple Queue Service, Elastic Container Service), Google Cloud Product (Cloud Run), REST API, Docker, Github Actions, Linux, CLI, RabbitMQ, Firebase, Ganache, Milvus, Postman, Insomnia