Nidarshan Siddegowda

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Education

Purdue University — West Lafayette, IN
MS in Computer Science, Minor in Physics — *Jan. 2023 – Present*

- **Relevant Coursework**: Information Security, Data Mining/Machine Learning, Algorithmic Game Theory

Purdue University — West Lafayette, IN
BS in Computer Science, Minor in Physics — *Aug. 2020 – Present*

- **Relevant Coursework**: Java/OOP Programming, C Programming, Data Structures/Algorithms, Computer Architecture, Systems Programming, Data Mining/Machine Learning

Experience

Audible: An Amazon Company — June 2023 - Present
Software Engineer Intern — *Cambridge, MA*

- Wrote Java backend to effectively implement promotional listening events on Audible on Alexa
- Worked extensively with AWS CDK and services, such as S3, ECS, SQS, DynamoDB, and OpenSearch, in order to integrate my changes from end-to-end on Audible's Alexa backend service
- Wrote Java unit and integration tests using JUnit and Mockito framework. Added Cloudwatch metrics to trigger alarms and issue tickets based on failure severity

Capital One — June 2022 – August 2022
Software Engineer Intern — *San Francisco, CA*

- Developed a full-stack application for internal use using React, Node.js, and Java
- Wrote end-to-end and functional UI tests using Cypress framework
- Helped develop the BFF layer using Apollo Server (GraphQL) to effectively service the frontend

Pinger — February 2022 – May 2022
Software Engineer Intern — *San Jose, CA*

- Worked in an AGILE environment to write and execute XCUI, Espresso tests, and unit tests in order to maintain integrity of the product using both Android Studio and XCode
- Integrated test automation into CI/CD pipelines and Jenkins server
- Responsible for backend build system (Jenkins pipelining), development environment (Vagrant), and tools (Docker)
- Designed and implemented internal tools that helped increase backend team productivity on a day-to-day basis

Research

Google x Purdue: Tensorflow Model Garden — Purdue University
Undergraduate Researcher — *Aug. 2022 - Dec. 2022*

- Working in collaboration with Google to help implement and sample state-of-the-art machine learning models on the official TensorFlow Model Garden git repository
- Developed a Res-Net model to correctly classify digits in the MNIST database
- Created a convolutional neural network using the Sequential model class to classify hand pose images as rock, paper, or scissors
- Implemented optimizers for Mesh-RCNN task file to increase efficiency of training

Projects

Cloudflare Blog Platform | *NodeJS, React, Cloudflare Workers API*

- Designed and built a blog platform with a serverless API using CloudFlare's Workers API
- Backend utilizes the Workers KV namespace to store and retrieve blog posts
- Implemented frontend using React

Blublock Blockchain Application | *Python, Flask, OpenSSL*

- A decentralized ledger that keeps track of transactions
- Implemented Python's hashlib library for SHA256 functionality

- Efficient hashing verification using Merkle Trees
- OpenSSL for RSA signatures/encryption and signature verification
- Utilized Python Flask for routing

Cards Against Humanity Simulator | *NodeJS, Socket.IO, HTML, CSS, jQuery*

- Implemented Socket.IO library for real-time, bidirectional communication
- Frontend developed using React (Typescript/NodeJS)
- Backend developed using NodeJS

Technical Skills

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, PHP, MATLAB
Frameworks: React, Node.js, Flask, JUnit, Espresso, Cypress, Google Guice
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Jira, Jenkins, Linux/Unix, MacOS, Windows, Android Studio, XCode, AWS
Libraries: pandas, NumPy, Matplotlib, Socket.IO, hashlib, Tensorflow, Keras