

Nghia Hoang

SOFTWARE ENGINEER

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Education

Purdue University

West Lafayette, IN

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND MATHEMATICS, GPA: 3.92/4.0

May 2024

- **Relevant Coursework:** OOP, Data structures, Algorithms, Computer Architecture, Operating System, Compiler, Machine Learning

Skills

Languages C, C++, Python, Java, Rust, Go, JavaScript, TypeScript, Scala, Solidity, ARM Assembly, SQL
Technologies React, Node, Express, Spring, gRPC, Protobuf, Azure, AWS Dynamodb, PostgreSQL, MongoDB, Docker, Kubernetes, JUnit, Jira

Experience

Bosch Software

SOFTWARE ENGINEER INTERN

May 2023 - Aug 2023

- Designed and developed a web application that serves as a marketplace for vehicle software using **TypeScript, Node, React, PostgreSQL**
- Implemented features that increase the reliability and security of the application including **load balancer, rate limiter and reverse proxy**
- Containerized components of the application using **Docker** and successfully deployed the application to **Azure platform**
- Distributed an embedded system into components and implemented connections using **gRPC, Protobuf** reducing **build time by 80%**

Genesys

SOFTWARE ENGINEER INTERN

May 2022 - Aug 2022

- Designed and implemented a microservice to keep track of 500 phone numbers used in production for Genesys Cloud Voice team using **Java (Spring)** and **AWS DynamoDB**
- Implemented a python script to eliminate fake numbers in current service saving **40% occupied space**
- Implemented a python script to support backward compatibility between services saving **15 hours of work**
- Set up **Jenkins test pipeline** for Spring service and configured **Docker** images for it to run
- Wrote integration tests for **80% test coverage** and deployed the service to AWS platform using **CloudFormation, Packer, Ansible**
- Documented the service architecture and **20 API endpoints** of the service and wrote performance report

Purdue University

TEACHING ASSISTANT

Aug 2021 - Dec 2022

- Held weekly office hours to assist students with **data structure and algorithm** topics
- Prepared and graded programming, written assignments for **100+ students**, and answered questions on Piazza

NTN

SOFTWARE ENGINEER INTERN

May 2021 - Aug 2021

- Developed an e-commerce website that serves as the online shopping platform for the company using **React, Node, Express**
- Implemented exporting data from database to CSV files feature used by company's accountants
- Utilized **Google Maps API** to display a list of stores to assist customers in finding the best fit location
- Automated newsletter sending to **500+ subscribed customers** via email/text message process, saving **10 hours of work** per week

Projects

DeFi projects

- Designed and developed core components of 2 decentralized applications including smart contracts and web3 frontend
- Applications: GMD protocol (gmdprotocol.com), GND protocol (gndprotocol.com)
- Technologies: **Solidity, React, GCP, Cloudflare**

Java Subset Compiler

- Wrote a compiler from a subset of Java to ARM Assembly utilizing recursive descent parser, register allocation, and data flow analysis
- Technologies: **C/C++**

Shell

- Developed a UNIX shell supporting advanced features including line editing, history list, and path completion
- Technologies: **C++, Lex, Yacc**