

Hany Yacoub

yacoub.dev | 612-438-4389 | hanygyacoub@gmail.com | github.com/hany-yacoub

Education

University of Minnesota - Twin Cities

Sep. 2019 – May 2023

B.S in Computer Science | GPA: 3.8 / 4.0

- College of Science and Engineering Dean's List
- Relevant Coursework: Advanced Algorithms and Data Structures, Functional Programming, Parallel Computing, Machine Learning, Software Engineering, Databases, Operating Systems, Distributed Systems

Experience

Hewlett Packard Enterprise

Jul. 2023 – Present

Graduate Software Engineer

- Built a distributed, scalable task processor used daily, turning development tasks into YAML configuration
- Adapted and extended Java Spring components to handle dynamic inputs using design patterns where fitting
- Designed and implemented a React SPA featuring a drag-and-drop editable graph and a code editor
- Implemented SSO authentication using OIDC 2.0 and JWTs as well as performant authorization using OPA
- Created CI/CD components involving optimized Docker images, Jenkins Pipelines, key vault services, Kubernetes/Helm manifests, ArgoCD listeners, and Microsoft Azure infrastructure
- Designed and implemented NestJS RESTful and GraphQL APIs

University of Minnesota

Sept. 2021 – Dec. 2021

Undergraduate Teaching Assistant

- Taught programming principles in Java to 120+ students emphasizing best practices
- Taught an introduction to Object Oriented Programming including modeling real life problems and solutions
- Presented labs, ran office hours, and graded exams, assignments, and projects

Kinetics

Jul. 2020 – Aug. 2020, Jun. 2021 – Aug. 2021

Software Engineer Intern

- Designed and implemented RESTful and GraphQL APIs using Node.js and Express.js connected to a MongoDB database
- Implemented a React UI involving state management, routing, and querying frameworks
- Assisted with CI/CD and infrastructure, including deployments using Docker and Kubernetes and pipelines using Jenkins
- Researched suitable cloud providers according to deployment and configuration options, including AWS and Microsoft Azure Cloud

Tech For Good Inc.

Jun. 2021 – Aug. 2021

Software Engineer Intern

- Developed a Django RESTful API connected to a PostgreSQL database for a crisis-reporting app, including posting and chatting features
- Applied RDBMS principles for fast data retrieval and manipulation
- Containerized the application and development environment using Docker, resulting in saved setup time for new developers

Projects

See on Github: Neural Network from Scratch - Python, Functional Lisp Interpreter - OCaml, Multithreaded HTTP Server - C, Shell from Scratch - C, Battery Display Monitor - C/Assembly, RPC PubSub System - C++, Distributed/Replicated Forum - C++, Recommendation System - Python/Spark, 3D Flight Simulator - C++/Three.js

Skills

Languages: JavaScript/TypeScript, Java, Python, SQL, C++, C, x86-64 Assembly, OCaml

Web Development: Node.js, Nestjs, React, Redux/MobX, MongoDB, PostgreSQL, Spring Boot, JWT, OPA, jQuery

Data Science: Apache Spark, NumPy, pandas, OpenCV, Spacy

Misc.: Kubernetes, Docker, Git, Jenkins, ArgoCD, Google Test, JUnit, OpenMP, MPI, Doxygen