

Hoang Nguyen

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EDUCATION

University of Washington

Bachelor's in Computer Science

Expected Dec 2025

SKILLS

Languages: Python, C++, C, Golang, SQL, Java, TypeScript

Frameworks and Libraries: PyTorch, Numpy, Matplotlib, Sklearn, FastAPI, Flask, Django, CMake, vcpkg, CUDA, OpenGL, GLSL, POSIX, Gin, Postgres, Redis, MySQL, Docker, Nextjs, React, Node.js, Express.js, GraphQL, AWS, Google Cloud Platform, Spark, gRPC

EXPERIENCE

Software Engineer Intern

Yoomi Health

Oct 2023 – Dec 2023

Remote, WA

- Engineered real-time body-pose tracking using TensorFlow.js and YOLOv5, which increased client-side render FPS from 20 to 60.
- Developed a custom TypeScript visualization library with 20+ charts, integrating Nivo.js, which provided robust data analysis capabilities.
- Implemented AWS Lambda and Cognito-based authentication workflows, which contributed to secure backend infrastructure.

Software Engineer Intern

Rocket Mortgage

Jun 2023 – Aug 2023

Detroit, MI

- Developed a full-stack application using React, TypeScript, and AWS serverless technologies (Lambda, API Gateway, RDS), which streamlined internal coaching session analysis.
- Integrated Microsoft Graph API and SAML-based SSO into the React frontend, which provided secure user authentication and real-time meeting data retrieval.
- Implemented unit and e2e tests with Jest for the full-stack application, which ensured code quality and robustness in a cloud environment.

Software Engineering Officer

Software Engineering Club (SWECC) UW

Sep 2024 – Apr 2025

Seattle, WA

- Engineered an automated interview platform using Django, PostgreSQL, and AWS EC2, which saved 3 hours/week in officer time.
- Developed a container monitoring service with FastAPI, Docker SDK, and DynamoDB, improving system uptime by 30%.
- Integrated CI/CD pipelines using GitHub Actions and Docker, reducing manual maintenance efforts by 50%.

PROJECTS

Husky Holdem | *Go, Python, Gin, Gorilla, Docker, RabbitMQ, Postgres, Redis*

- Developed distributed poker-bot platform using Go and Docker, which demonstrated skills in backend development and containerization.
- Designed scalable API with Gin and Gorilla, by implementing hexagonal architecture, which highlighted REST API proficiency.
- Integrated RabbitMQ for code execution and Postgres/Redis for data, which showcase knowledge of relevant technologies.

Rick Sanchez Chatbot | *Pytorch, Numpy, Docker, Redis, Postgres, HuggingFace, Puppeteer*

- Generated a Rick Sanchez-themed Discord chatbot by fine-tuning DialoGPT with PyTorch, which demonstrated proficiency in Python and transformer models.
- Containerized chatbot with Docker, integrating Redis and Postgres for stateful interactions on Discord, which aligned with the job's emphasis on containerization and distributed systems.
- Optimized text generation using hyperparameter tuning and prompt engineering, which improved model perplexity by 12%, showcasing hands-on performance tuning and debugging.

Lung Cancer Detection | *Pytorch, Python, OpenCV*

- Developed four 3D U-Net CNN architectures using Python and PyTorch for lung cancer detection, achieving 78% validation accuracy through iterative model design and training.
- Implemented image preprocessing and augmentation techniques with OpenCV on a 63 MRI scan dataset, enhancing model generalization and performance.
- Collaborated within a team, contributing to technical discussions and documentation, showcasing strong problem-solving and communication skills, and improving outcomes.