

Ka Long Ngai

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EDUCATION

Stony Brook University

Bachelor of Science in Computer Science with Specialization Artificial Intelligence and Data Science

Awards: Outstanding Academic Awards (6x), Dean List (6x)

Stony Brook, NY

Expected December 2025

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C++, C, TypeScript, Bash, SQL

Web Technologies: HTML, CSS, React.js, Node.js, Express.js, Next.js, RESTful APIs

Databases: MongoDB, SQLite, DynamoDB

Tools & Platforms: Git, GitHub/GitLab, AWS, Unix/Linux, Docker, Microsoft Azure

Frameworks & Libraries: JUnit, Mockito, Dagger, NumPy, Pandas, PyTorch, Qt, ROS2

Methodologies: Agile, SCRUM, DevOps, CI/CD, Software Engineering, Design Patterns

EXPERIENCES

Amazon

Irvine, CA

Software Development Engineer Intern, Device Org, Alexa Proactive Notifications

May 2025 - August 2025

- Pioneered an event-driven architecture for Alexa notifications, integrating AWS services, proprietary data sources and LLM to deliver personalized, real-time alerts on events (sports, entertainment, local) to millions of customers
- Architected a highly scalable serverless system in Java, utilizing advanced design patterns to enforce code reliability through mandatory JUnit and Mockito unit-test at 100% coverage
- Refined product reliability and readiness for production deployment by implementing key performance metrics and alarms, contributing to a target of 99% uptime

Stony Brook University College of Engineering and Applied Sciences

Stony Brook, NY

Data Structures & Algorithms Teaching Assistance

January 2025 - May 2025

- Conducted weekly one-hour recitations for 30 students on data structures and algorithms in Java, enhancing comprehension through creative examples and collaborative discussions
- Provided consistent student support by holding five weekly office hours and responding daily to emails and Piazza forum posts to clarify course material and assignments
- Contributed to a positive learning environment by offering timely and personalized assistance, ensuring students had the resources needed to succeed in the class

Cohesive Robotics

Brooklyn, NY

Software Engineer Intern

June 2024 - August 2024

- Enhanced a smart finishing robotics workcell HMI using C++ and the Qt framework, improving UI elements and logic to reduce clicks and boost operator experience by 30%
- Performed rigorous testing on a ROS2-based robotic arm, simulating end-to-end operator scenarios to reduce failure risk by 10% through strategic bug fixes and the addition of unit tests
- Maintained and refactored a 50,000-line C++ and Python codebase, migrating to a newer LTS framework, rewriting illogical sections, and implementing advanced data structures to simplify code
- Improved code safety and readability by 20% by implementing linters and formatters like clang-tidy and cpp-format

PROJECTS

[Brokeify Lifetime Financial Planner](#), Software Development Leader

January 2025 - May 2025

- Developed a lifetime financial planning by developing a web application capable of executing 1,000 non-deterministic simulations on 50+ data fields in under 30 seconds
- Led a team of 4, applying strategic task allocation to distribute over 100 tasks and maintain an even, high-efficiency workload across the project lifecycle
- Selected and utilized a modern tech stack including React.js for the frontend, Node.js and Express.js for the backend, and MongoDB for the database