Ka Long Ngai

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EDUCATION

Stony Brook University   **Stony Brook, NY**
Bachelor of Science in Computer Science - GPA 4.0   *Expected December 2025*
Awards: Outstanding Academic Awards (5x recipients), Dean List (5x recipient)

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C++, C, TypeScript, Bash, SQL, Lua
Web Technologies: HTML, CSS, React.js, Node.js, Express.js, Next.js, RESTful APIs
Databases: MongoDB, SQLite, DynamoDB
Tools & Platforms: Git, GitHub/GitLab, AWS, Docker, Unix/Linux, Microsoft Azure, DigitalOcean
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*
- Designed and developed a scalable, event-driven framework for Alexa using AWS services (Lambda, SQS, Bedrock) and internal knowledge sources, to deliver personalized notifications about upcoming sports, entertainment, and location-based events
- Engineered a robust Java system with advanced design patterns (Dependency Injection, Builder), achieving 100% unit-test coverage with JUnit and Mockito to ensure quality and maintainability
- Maintained a healthy CI/CD software lifecycle by managing dependencies, updating software versions, and implementing metrics and alarms to monitor product health

Stony Brook University College of Engineering and Applied Sciences   **Stony Brook, NY**
Data Structures & Algorithms Teaching Assistance   *January 2025 - May 2025*
- Led 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 improved 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 web application for lifetime financial planning, capable of performing up to 1,000 simultaneous non-deterministic simulations based on a detailed 50-field user input form
- Led a team of 4, focusing on middleware development and distributing approximately 100 tasks to ensure an even workload and efficient project progression
- 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