Nathan Gong

(609) 454-1896 | nathangong9@gmail.com | linkedin.com/in/nathangong9 | github.com/nathan-gong

EDUCATION

Columbia University | New York City, NY   2024 - Present
Master of Science in Computer Science.

Northeastern University | Boston, MA   2019 - 2023
Bachelor of Science in Bioengineering. Minor in Computer Science. GPA: 3.96/4.0
Honors: University Honors Program, President's Award, Tau Beta Pi, Honors Research Award, PEAK Research Award

SKILLS

Languages: Python, C++, C, Bash, Java, SQL, PowerShell
Technologies: Git, Jira, Bamboo, WSL2, Docker, MongoDB, Neo4j, Vim, CMake, MySQL, Jupyter
Libraries/Frameworks: NumPy, Pandas, Scikit-learn, Matplotlib, GoogleTest, Selenium, Pytest, Tkinter, Flask

EXPERIENCE

Software Engineer | *Medtronic* | Boston, MA   Jun 2023 - Present
- Develop software in C++ and Python in an embedded mixed operating system environment for a surgical robotics platform, the company's highest-funded product
- Productionalize security, field service tooling, system reliability, and code generation features in full-stack applications to accelerate U.S. regulatory clearance and present contributions at international demonstrations
- Re-architect the failsafe system to reduce error recovery time by up to 70% and mitigate fatal disruptions during clinical procedures
- Collaborate with cross-functional Agile teams to define requirements, design architecture documents and diagrams, and perform code reviews
- Implement unit and integration test suites and increase code quality and coverage across multiple subsystems following test-driven development paradigms
- Earned Lean Six Sigma DRM certification in process improvement and product design

Software Engineer Co-op | *Medtronic* | Boston, MA   Jan 2022 - Jun 2022
- Built a full-stack Python application to aggregate web data and generate risk reports for over 30 off-the-shelf software products on a surgical robotics platform, improving efficiency from existing analysis methods by 80%

Teaching Assistant | *Northeastern University* | Boston, MA   Sep 2020 - Aug 2022
- Held weekly office hours to assist students with assignments, coding practices, and exam preparation across upper-level computer science and bioengineering courses

Software Engineer Co-op | *iRhythm Technologies* | San Francisco, CA   Jan 2021 - Jun 2021
- Developed automated firmware testing infrastructure for an ambulatory cardiac monitoring device
- Designed APIs to communicate with firmware and manufacturing software tools and configure embedded systems

PROJECTS

Movie Data Engineering Tool   Nov 2024 - Dec 2024
- Developed a Python web application to scrape and clean data from multiple online databases, store data in MySQL, MongoDB, and Neo4j databases, and transform and visualize data to display insights on movie and actor popularity

Puzzle Solver   Sep 2024 - Oct 2024
- Implemented optimized constraint satisfaction and adversarial search algorithms to solve Futoshiki and 2048 games

Image Processor   May 2021 - Jun 2021
- Designed a Java desktop application supporting multi-image filtering, transformation, and generation operations