Nathan Gong

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EDUCATION

Columbia University | New York City, NY   2024 - Present
Master of Science in Computer Science.
Coursework: Artificial Intelligence, Computer Vision, Databases, Networks
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++, Java, SQL, C, Bash, 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   Jan 2022 - Present
- Developed and deployed software in C++ and Python in an embedded mixed OS environment for a surgical robotics platform, the company's highest-funded product
- Spearheaded productionalization of key security, reliability, and code generation features in full-stack applications to accelerate U.S. regulatory clearance, while presenting contributions at international demonstrations
- Re-architected the failsafe system to reduce error recovery time by up to 70% and mitigate fatal disruptions during clinical procedures
- Collaborated with cross-functional Agile teams to define software requirements, design architecture documentation, and lead code reviews
- Built a full-stack Python application to aggregate web data and generate risk reports for 30+ off-the-shelf software products, streamlining the user experience and improving efficiency of analyses by 80%
- Implemented comprehensive unit and integration test suites, increasing code quality and coverage across multiple subsystems in adherence to test-driven development best practices
- Achieved Lean Six Sigma DRM certification in process improvement and product design

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

Software Engineer Co-op | *iRhythm Technologies* | San Francisco, CA   Jan 2021 - Jun 2021
- Automated firmware testing infrastructure for an ambulatory cardiac monitoring device to reduce test time by 50%
- Designed APIs to interface with manufacturing software tools and configure embedded systems for production

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 to support image filtering, transformation, layering, and generation, improving the user experience with intuitive graphical and scripting interfaces