

# Nathan Gong

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

## EDUCATION

**Northeastern University** | Boston, MA

2019 - 2023

Bachelor of Science in Bioengineering. Minor in Computer Science. GPA: 3.96/4.0

*Coursework:* Computer Systems, Algorithms, Object-Oriented Design, Database Design, Discrete Structures, Statistics, Biomedical Data Science, Modeling & Inference, Dynamical Systems, Systems Biology

*Honors:* University Honors Program, President's Award, Tau Beta Pi, Honors Research Award, PEAK Research Award

## SKILLS

*Languages:* Python, Java, C++, C, SQL, R

*Libraries/Frameworks:* Pandas, NumPy, Matplotlib, Requests, BeautifulSoup, Selenium, Pytest, Tkinter, Flask

*Technologies:* Git, Jira, MySQL, WSL2, Vim, Jupyter

## EXPERIENCE

**Software Engineer** | *Medtronic* | Boston, MA

Jun 2023 - Present

- Developing software for a surgical robotics platform

**Software Engineer Co-op** | *Medtronic* | Boston, MA

Jan 2022 - Jun 2022

- Built a full-stack desktop app to aggregate web data and perform risk analyses for a surgical robotics platform
- Architected and implemented Python code to improve efficiency from existing analysis methods by several hours
- Scraped software anomalies and cybersecurity vulnerabilities from REST APIs to identify potential risk factors
- Collaborated in agile teams to scope feature requests, produce design documentation, and review pull requests

**Teaching Assistant** | *Northeastern University* | Boston, MA

Sep 2020 - Aug 2022

- Held weekly office hours to assist students across upper-level computer science and bioengineering courses
- Provided aid with assignments, coding, and exam preparation by emphasizing core concepts and problem-solving

**Software Engineer Co-op** | *iRhythm Technologies* | San Francisco, CA

Jan 2021 - Jun 2021

- Developed automated testing infrastructure to support regulatory clearance of cardiac monitoring device firmware
- Designed APIs to interface with firmware and manufacturing software tools and configure embedded systems
- Automated firmware validation and verification test cases to accelerate release cycles and reduce manual burden
- Enforced CI/CD and provided cross-functional unit, integration, and smoke tests through test-driven development

**Research Assistant** | *Northeastern University, Apfeld Lab* | Boston, MA

Dec 2019 - Dec 2020

- Investigated genetic pathways involved in aging and stress resilience in *C. elegans* and their human orthologs
- Engineered a multi-worm tracker in Python to produce quantitative locomotion data from microscopy footage

## PROJECTS

**Predicting Biodiversity and Dynamics**

Sep 2022 - Dec 2022

- Simulated predator-prey systems to predict how environmental factors influence emergent community behaviors
- Generated differential equation models and data visualizations to identify patterns in population stability

**Agroindustrial Carbon Capture System**

Jul 2022 - Dec 2022

- Performed techno-economic analyses on crop efficacy to offset carbon emissions and optimize farmland use

**Image Processor**

May 2021 - Jun 2021

- Designed a layered image manipulation and enhancement app offering a Swing GUI and batch scripting interface
- Supported image file handling, filtering and color transformations, and programmatic image generation

**NULabs**

Feb 2021 - Apr 2021

- Built a Flask web application to navigate the research laboratories consolidated across all departments at NEU
- Designed a MySQL schema to store and query real-world data parsed in Python via various user access levels