Nathan Gong

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EDUCATION

Northeastern University | Boston, MA 2019 - 2023

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

Coursework: Biostatistics, Biomechanics, Bioelectricity, Quantitative Physiology, Multivariable Calculus, Discrete Structures, CS Fundamentals I/II, Differential Equations & Linear Algebra

Activities: University Honors Program, Biomedical Engineering Society, AerospaceNU, Intramural Tennis

EXPERIENCE

Teaching Assistant | *Northeastern University* | Boston, MA Sep 2020 - Present

- Assisted students in Quantitative Physiology with understanding core concepts and problem-solving strategies
- Held weekly office hours to aid students with homework assignments, MATLAB projects, and exam preparation

Science Olympiad Event Supervisor | *Massachusetts Institute of Technology* | Cambridge, MA Oct 2019 - Jan 2020

- Coordinated competition events and hosted ~70 high-schools at the annual MIT Science Olympiad Invitational
- Authored, administered, and graded tests and supervised a team of volunteers for on-site and online operations

Software Quality Assurance Test Intern | *G3DVu* | Princeton, NJ Jul 2019 - Aug 2019

- Tested live visual effects created by a proprietary AR computer vision system in football video broadcasts
- Performed regression testing on component modules to identify failure cases and collect performance statistics

Mathematics and Reading Instructor | *Kumon North America, Inc.* | Skillman, NJ Nov 2015 - Aug 2019

- Tutored students grades K-12 in mathematics and English comprehension up to college-level difficulty
- Assisted branch owner with keeping inventory, greeting clients, and maintaining student performance logs

RESEARCH

Research Assistant | *Northeastern University, Apfeld Lab* | Boston, MA Dec 2019 - Present

- Investigated aging and stress resilience in C. elegans through computational and wet-lab projects
- Received the PEAK Research Award and the Honors Early Research Award and presented to the PEAK cohort

Research Project Manager | *Columbia University* | New York City, NY Jun 2018 - Aug 2018

- Demonstrated long-term degradation of commercial water filters at ion removal from tap water
- Managed a research team and conducted spectrometry, titrations, and statistical data analysis

PROJECTS

BioPy Jun 2020 - Aug 2020

- Built a Python package containing useful bioinformatics modules for genetic and hereditary analysis
- Implemented algorithms underlying mass spectrometry, genomics, string searching, and probability

GE Digital Technology Data Analytics Program Jun 2020 - Jul 2020

- Engineered and visualized GE Aviation real-time flight data in Dataiku to drive manufacturing insights
- Compiled datasets using Postgres and created run charts and KPI tables to analyze airplane part design

Computational Worm Tracker Mar 2020 - Jun 2020

- Engineered a multi-worm tracker in Python to produce quantitative locomotion data from microscopy footage
- Analyzed data to make predictions on C. elegans behavior when exposed to compounds in chemotaxis assays

SKILLS

Languages: Java, Python (numpy, pandas, matplotlib, scikit-learn), MATLAB, C++, JavaScript (Bootstrap), HTML/CSS
Wet Lab: Cell culture, PCR, gel electrophoresis, C. elegans, CRISPR, RNAi, autoclave
Technologies: Arduino, AutoCAD, SolidWorks, Git, Anaconda, Jupyter