

Professional Experience

- Applied Technologies Co-Op, Automation Engineering; Moderna, Inc.**, Norwood, MA Jan.-Jun. 2024
- Developed scripts and integrated tools & software to automate engineering lab tasks (electrical design, 3D printing queues, label generation, lean/5S) using **Python 3 (pyodbc, wx)**, **SQL**, **Git**, and **SmartSheet**.
 - Directed the planning and development of bench-top demos and supported the assembly, organization, and testing of major projects by applying electrical, control systems, and mechanical engineering skills with **SEE Electrical**, **Productivity PLCs**, and **SolidWorks CAD**.
 - Compiled comprehensive offboarding documentation, guides, and presentations for tools, scripts, and processes to ensure seamless project handovers and knowledge transfer.
 - Created ground-up training pathways for 3D printers and laser cutters by integrating online education materials and self-produced videos, streamlining onboarding processes.
 - Leveraged enterprise LLMs as digital assistants to automate repetitive tasks, freeing time for problem-solving.
- Computational Chemistry Co-Op; Novartis AG**, Cambridge, MA Jul.-Dec. 2022
- Engineered **Python 3 (rdkit, Pandas, NumPy, matplotlib)** scripts for complex data analysis studies and cheminformatics tools for drug discovery.
 - Built an extension enabling direct transfer of molecular data from Schrödinger Maestro to internal processing pipelines, reducing reliance on costly 3rd-party software, using **Python**, **pip**, **PowerShell**, and **Git**.
 - Formulated algorithms and data structures to compare terabytes of chemical data for a statistical analysis study with **Python**, **Bash**, and **JupyterHub**, requiring both computer systems and molecular structure knowledge.
- Software Engineering Co-Op; Intuit Inc.**, Remote Jun.-Dec. 2021
- Delivered full-stack production code for QuickBooks Live to facilitate reliable customer to expert interactions, both customer-facing with **JavaScript (React.js, Angular, Redux, Jest)** and administrative tools with **Java**.
 - Applied engineering and teamwork strategies, such as version control with **Git**, agile development with **Jira**, integration/automation testing with **Docker and Cypress**, and real-user monitoring with **Splunk**.

Technical Skills

Programming Languages/Frameworks	Engineering/Development Tools	Data and Life Science Methods
JavaScript/TypeScript (<i>React.js, Node.js, Next.js, socket.io</i>), Python 3 (<i>Pandas, NumPy, matplotlib</i>), R, Bash, SQL, Java, C	Software Testing, Git, CI/CD, Agile Development with Jira, Docker, PLC Programming, AWS Lambda & DynamoDB	Machine learning, statistical testing, biology and chemistry lab methods, sequencing and genome assembly

Education

- Northeastern University**, Boston, MA
- **Master of Science in Bioinformatics** (*College of Science*) August 2024
GPA: **3.94/4**; *Coursework*: Bioinformatics Programming/Methods/Stats., Computer Systems, Machine Learning
 - **Bachelor of Science in Computer Science and Biology** (*Khoury College of Computer Sciences*) April 2023
Minor: **Mathematics**; Graduated *Summa Cum Laude*, GPA: **3.95/4**; *Coursework*: Algorithms and Data, Theory of Computation, Database, Biochemistry, Organic Chemistry, Microbiology, Genetics, Statistics

Teaching Experience

- Teaching Assistant, Northeastern University, Khoury College of Computer Sciences**, Boston, MA
- Held office hours, proctored exams, led lab sections, created assignments, and graded to help students learn:
- **CS3000 Algorithms and Data**: Recursive, dynamic, greedy, randomized, and graph algorithms, their formal correctness, and their time and space complexities; Crucial data structures and their representations. Sep.-Dec. 2023
 - **CS3800 Theory of Computation**: Formal language theory, automata, regular expressions, grammars, Turing machines, recognizability and decidability, reduction proofs, completeness, and P vs. NP. Jun.-Aug. 2023
 - **CS2510 Fundamentals of Computer Science 2** (Jan.-Apr. 2022); **CS1800 Discrete Structures** (Sep.-Dec. 2020)

Projects

- Apinis.org**, github.com/mapinis/mapinis.github.io – *TypeScript: Next.js, React.js, Node.js; GitHub Actions CI/CD* August 2024
- Portfolio website, with basic info, hobbies, and projects. Open source and continuously deployed static site.
- An Ensemble Model to Classify Voter Propensity from Census Data**, available on request – *R; Python 3* April 2024
- Built Naive Bayes, logistic, and neural network classifiers to predict if a person voted from demographic data, and combined into an ensemble model. Written as an RMarkdown report detailing thinking and decisions.
- Covey.Town Feature Expansion**, available on request – *TypeScript: React.js, socket.io, Node.js, Phaser* December 2023
- Added emoji reactions and aggregate moods to a virtual video chat game as a capstone project. Worked with a small team to propose, scope, implement, and present the features through an agile process.