apinis.org
github.com/mapinis
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# Mark Apinis

mark@apinis.org
Boston, MA

## Education

**Northeastern University**, Boston, MA

- **M.S. Bioinformatics** *(College of Science, PlusOne Program)* — Aug. 2024
  GPA: **3.94**/4; *Coursework:* Binf. Programming/Methods/Stats., Computer Systems, Machine Learning
- **B.S. Computer Science and Biology; Minor Mathematics** *(Khoury College of Computer Sciences)* — Apr. 2023
  Graduated *Summa Cum Laude*, GPA: **3.95**/4; *Coursework:* Software Engineering, Algorithms and Data, Theory of Computation, Database, Biochemistry, Organic Chemistry, Microbiology, Genetics, Statistics

## Technical Skills

Proficient in Python 3 *(Pandas, NumPy)*, R *(caret)*, JavaScript/TypeScript *(React.js, Node.js, socket.io, Jest)*, Git, LaTeX
Familiar with ML methods, statistical testing, Bash, C, Java, Agile Development in Jira, MySQL, biology lab safety
Knowledge of Camunda Workflow, PLC Programming, Splunk, Docker, C++, macOS and Windows troubleshooting

## Professional Experience

**Applied Technologies Co-Op, Automation Engineering; Moderna, Inc.**, Norwood, MA — Jan.-Jun. 2024

- Developed scripts and researched tools & software to automate engineering lab tasks such as label generation, electrical design, 3D printing queues, and lean organization through 5S principles.
- Expanded my skills through exposure to electrical and mechanical engineering, taking ownership of planning and building smaller demos while assisting in assembling, organizing, and testing major projects.
- Utilized enterprise LLMs as a digital assistant to automate simple tasks, freeing time for harder work.
- Created training materials and strengthened my understanding of the pharmaceutical industry.

*Technology Used: Python 3 (pyodbc, wx), SQL, SolidWorks CAD, SEE Electrical, Git, PLCs/HMIs*

**Computational Chemistry Co-Op; Novartis AG**, Cambridge, MA — Jul.-Dec. 2022

- Engineered Python scripts for data analysis studies and cheminformatics tools for drug discovery.
- Wrote an extension for scientists to directly transfer chemical data from Schrödinger Maestro to internal processing pipelines, reducing dependence on costly 3rd-party software.
- Designed algorithms and structures to compare terabytes of chemical data for a statistical analysis study, requiring both computer systems and molecular structure knowledge.

*Technology Used: Python 3 (rdkit, Pandas, NumPy, matplotlib, pip), Jupyter, Git, PowerShell, Bash*

**Software Engineering Co-Op; Intuit Inc.,** Remote — Jun.-Dec. 2021

- Wrote full-stack production code for QuickBooks Live to facilitate reliable customer to expert interactions.
- Used key engineering and teamwork concepts, such as version control and branching, agile development, integration/automation testing, RUM, feature flags, and data security.

*Technology Used: JavaScript (React.js, Redux, Jest), Jira, Git, Docker, Java, Splunk, Camunda Workflow*

## Teaching Experience

**Teaching Assistant, Northeastern University, Khoury College of Computer Sciences,** Boston, MA
Held office hours, lead lab sections, created assignments, and graded to solidify students' understanding of:

- **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. — Fall 2023
- **CS3800 Theory of Computation:** Language classes, closure, automata, regular expressions, grammars, Turing machines, recognizability and decidability, reduction proofs, completeness, and P vs. NP. — Summer 2023
- **CS2510 Fundamentals of Computer Science 2** (Spring 2021/22); **CS1800 Discrete Structures** (Fall 2020)

## Projects

**An Ensemble Model to Classify Voter Propensity from Census Data**, available on request – *R, Python 3* — Spring 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* — Spring 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.