Nadim Mottu

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Skills

Languages: Java, Python, C, MIPS, GML, Lua
Web Dev: JavaScript, HTML, CSS, React, Next.js
Databases: PostgreSQL, Prisma, SQLite

Libraries: Java Swing, Numpy, SciPy, scikit-learn, JavaFX
OS: Debian, Ubuntu, Windows
Tools: Docker, NextCloud, Latex, excel, GIMP, Adobe Photoshop, Adobe Premiere

Education

University of Toronto **September 2022 – May 2026**
Honours Bachelor of Science
Computer Science Specialist with a Focus in Theory of Computation, Minor in mathematics

- cGPA: 3.73
- Courses Taken: Computer Organization, Software Tools and Systems Programming, Enriched Data Structures, Software Design, Enriched Theory of Computation, Analysis I&II, Algebra I&II, Probability and Statistics I, Topology
- Courses in Progress: Machine Learning, Artificial Intelligence, Programming on the Web, Databases, Graph Theory
- University Of Toronto International Scholar Award - Faculty of Arts and Science (2022-2026) Dean's List Scholar in the Faculty of Arts & Science (2023-2024) Innis College Exceptional Achievement Award (2023-2024)

Experience

Internal Drive Tech **June – August 2024**
Instructor *Amazon HQ/American University — Washington, DC*

- Taught children ages 7-9 coding skills and computer literacy through games like scratch, Lua (Roblox) and Minecraft
- Helped over 50 students develop projects over the course of one week making sure to highlight important software engineering practices such as testing, debugging, reviewing one another's work. Collaborated with other instructors to develop curriculums and filled in knowledge gaps in the case of individual students projects and filled in when needed.
- Explained the above skills and technical concepts such as boolean algebra at an elementary school level.

Toronto Climate Observatory **May – June 2024**
Research Assistant *University of Toronto — Toronto, ON*

- Collaborated with another undergraduate student to develop a research project using CMIP6 to predict changes in temperature in Toronto and how that might impact skating rink closures. Documented and explored "the usability gap" and how to make climate data more usable to people with only a basic understanding of climate science.
- Used data analysis libraries for Python such as NumPy and Matplotlib, along with techniques such as linear regression.

Highlighted Projects

Scriptorium **September 2024 – Present**

- Collaborated with a team to develop a website in React framework allowing users to develop and share their code.
- Provides isolation to all projects using Docker, and allows users to run one another's code in a safe environment.
- Allows for user account creation authentication, rating, posts, and reporting. Follows Rest best practices.

D&D Digital DM screen App **April 2024 – Present**
https://github.com/nadim-mott/DnD-Screen

- Developed a digital DM screen for Dungeons and Dragons in JavaFX. Follows the MVC design pattern.
- Uses databases to store information on monsters and spells. Stores data with optimal use of custom data structures.
- Makes use of the Open5e API to provide information on spells and monsters. Provides dice roller, and initiative tracker.

Tetris in Assembly **January 2024 – April 2024**
https://github.com/nadim-mott/tetris_assembly

- Developed a Tetris game in MIPS assembly language. Used the SATURN simulator to run the code.
- Made use of low level programming techniques to develop the game. Used bit map to display the game and UI.
- Collaborated with a partner. Wrote the game logic, graphics, and reviewed code written by my partner.

Caesar Productivity App **September 2023 – December 2023**
https://github.com/nadim-mott/Caesar

- Developed a task and event management application in Java, adhering to Clean Architecture and SOLID principles.
- Built the app from scratch as part of a team of three. Conducted code reviews for other contributors' use-cases.