Spencer Perkins

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Technical Skills

- **Languages:** Python; Java; C; SQL; Bash; JavaScript; HTML; CSS; R;
- **Frameworks/Tools:** Git; Linux; API's; MongoDB; Postgres/MySQL; PyTorch; Pytest; Scipy; Numpy; Sklearn; JUnit; Docker; Gradle; Django; React;

Experience

Machine Learning Intern | Pardee Lab **|** Toronto Ontario 05/2023 – Present

- Implemented a distributed computing platform on Google Cloud using the MongoDB API to run a PyGAD genetic algorithm, reducing the running time by a factor of ~20.
- Performed research on computational biology and machine learning and created/tested a variety of models to maximize accuracy for predicting functional protein mutations.

General Labourer | Township of Blandford Blenheim **|** Drumbo Ontario 05 – 08/2022

- Worked in a team to maintain the safety standards of roads resulting in fewer accidents.

Sales Associate | Canadian Tire **|** Woodstock Ontario 03/2019 – 08/2021

- Managed the needs of customers to ensure a quality shopping experience.

Projects

Interactive Research Platform | University of Toronto 2023

- Worked with an Agile team to make a React/Java web platform that facilitates the real-time interaction of humans and software agents in various decision-based games.
- Created an API for website-game interaction, designed the Python game logic and reinforcement learning models, and stored and analyzed the game data using MYSQL.

Java Tamagotchi Game | University of Toronto 2022

- Collaborated with a team of developers to create a Tamagotchi-style videogame in Java with a Swing UI that strictly followed Clean Architecture, MVC, and SOLID Principles.
- Implemented a database system allowing for online user interaction and saved games, handled input processing and passthrough, and performed debugging with Junit.

Predictive Model with Web UI | University of Toronto 2021

- Utilized Python with Pandas and Numpy to aggregate data and create a SKLearn-based predictive model to assess the impact of COVID-19 restrictions on restaurants.
- Used statistical analysis and visualization to draw conclusions for balancing COVID rates with business success and used DASH to display our results with web UI.

Education

University of Toronto | Toronto Ontario | Year 3 05/2026 (Expected)

- Bachelor of Science, Computer Science Specialization. A&S Internship Program.
- Relevant Coursework: Operating Systems; Algorithms; Machine Learning; Software Engineering; Web Programming; Software Testing; Databases; Data Structures