

# Haya Mahmoud

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## Skills

**Languages:** C, Python, JavaScript, Java, HTML/CSS

**Libraries/Frameworks:** Node.js, React, Libc, Matplotlib, Pandas, Seaborn, P5.js, Java Graphics2D

**Developer Tools:** Google Cloud Platform (GCP), Git, Bash, Valgrind, VS Code

**Relevant Skills:** Data Structures, Algorithms, Object Oriented Programming, Agile Methodologies, Communication

## Education

### Bachelor of Computing, Software Engineering (Co-op)

*University of Guelph*

*Sept 2024 – Expected Apr 2029*

- Area of Emphasis: Artificial Intelligence

## Projects

### ShelterMap Toronto – Sheridan Datathon 2025

*Python, Next.js, Leaflet, Google Cloud*

*Nov 2025*

[github.com/hayamahmoud/Datathon2025](https://github.com/hayamahmoud/Datathon2025)

- Built a full stack web app in a 24-hour hackathon that cleaned and joined Toronto homelessness datasets, then mapped high pressure areas so city planners can quickly spot high priority neighbourhoods for new shelter placement.
- Used **Google Cloud** to power the data pipeline and deployment, and our project was nominated for Best Use of Cloud.

### Statistics Canada Job Vacancy Analysis

*Python, Git, Seaborn*

*Mar 2025 – Apr 2025*

[github.com/hayamahmoud/Job-Vacancy-Analysis](https://github.com/hayamahmoud/Job-Vacancy-Analysis)

- Built a Python analysis tool with a team of three to clean and explore **219,912** Statistics Canada job-vacancy records across **33 quarters, 14 regions**, and **119 industries**, generating clear trend insights that highlight how vacancies change over time and differ by industry and region.

### AI-Powered Career Finder App

*HTML/CSS, JavaScript, Node.js, Google Gemini API*

*Jul 2025 - Aug 2025*

[github.com/hayamahmoud/CareerFinderAI](https://github.com/hayamahmoud/CareerFinderAI)

- Developed a career exploration web app that utilizes the **Gemini 3 API**.
- Implemented AI model rules to provide concise responses and generate only **2–3** relevant career paths based on user interests.

### Recipe Generator

*HTML/CSS, JavaScript, Node.js, Spoonacular API*

*Nov 2024 - Dec 2024*

[github.com/hayamahmoud/RecipeGenerator](https://github.com/hayamahmoud/RecipeGenerator)

- Developed a full stack web application using **Express.js** backend that generates recipes from user provided ingredients.
- Integrated the Spoonacular Food API to retrieve relevant recipes and support up to **100** results per request.

### Pengy Float Java Game

*Java, Graphics2D, NetBeans*

*Nov 2023 - Jan 2024*

[github.com/hayamahmoud/pengyfloat](https://github.com/hayamahmoud/pengyfloat)

- Led a team of two to design and develop a unique 2D game in Java using **Graphics2D**.
- Applied **object oriented** concepts and **agile methodologies** throughout development in order to create a scalable design.

## Work Experience

### Server/Shift Leader

*Sleeman Centre*

*Guelph, ON*

*Oct 2022 – Present*

- Serve **100+** customers per shift in a fast paced concessions environment.

- Promoted to Shift Leader, responsible for opening/closing operations and supervising **2–3** staff.

### Math/Science Tutor

*Centennial CVI*

*Guelph, ON*

*Sept 2023 – June 2024*

- Tutored Grade 9–12 Math/Science (Advanced Functions, Data Management, Biology, Chemistry, Optics).
- Enhanced communication and problem-solving skills by tailoring instruction for diverse students.

## Awards & Achievements

### University of Guelph's CEPS Dean's Honours List (3x)

*Sep 2024 - Dec 2025*

- Recognizes students with an average of **80%+** per semester.

### University of Guelph's Entrance Scholarship

*June 2024*

- **\$1000** awarded to incoming students with an admission average of **90%+**.

### NCWIT Aspirations in Computing Award

*Apr 2024*

- Awarded for excellence in CS, leadership, and extracurriculars in computing.