

## Zane Al-Hamwy

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### EDUCATION

**Queen's University** | Kingston, ON

Honours Bachelor of Computing, Minor in Mathematics **GPA: 4.23/4.30**

Expected: April 2028

- **Relevant Courses:** Discrete Structures, Cognitive Science, Linear Algebra II, Calculus II,

### PROFESSIONAL EXPERIENCE

**Executive Team Intern**

September 2024 - Present

*Queen's Computing Student Association*

- Represented **400+** computer science students at assembly meetings aimed at improving student interests
- Organized a high-impact alumni networking event attended by **50+** alumni and industry sponsors
- Collaborated directly with the COMPSA President to organize events, technical workshops, and networking opportunities

**Founding Executive Member**

July 2020 - July 2022

*The New Gen - Social Media Management*

- Founding executive member of The New Gen, a youth-led organization dedicated to helping young Canadian newcomers better integrate through arts, science, and social encounters
- Managed **2,000 +** accounts through emailing and delivering free classes
- Engaged with Vaughan City Councillor, Sandra Yeung Racco, to host accessible contests with **60 +** submissions

**Software Developer** | *Rust*

September 2024 - Present

*Queen's VEX U Robotics Team*

- Developing autonomous systems using **Rust**
- Exposure to the field of **computer vision** to help the robot detect objects

### PROJECTS

**Emotion Classification System** | *Python, TensorFlow, OpenCV, MediaPipe*

February 2024

- Developed a real-time emotion classification system using **OpenCV** and **MediaPipe** for facial and hand gesture analysis, combined with a **TensorFlow** deep learning model for emotion prediction
- Simultaneously processed facial expressions, left-hand, and right-hand landmarks in **real-time**
- Utilized **MediaPipe's** holistic solution to process facial landmarks and hand movements, improving **accuracy** and **robustness** in emotion recognition

**NLP-Powered Chatbot** | *Python, Flask, React Google Gemini*

January 2025

*QHacks - Backend Developer*

- Developed an **NLP-powered** chatbot using **Python**, **Flask**, and **spaCy**, enabling users to engage with simulated "landlords"
- Implemented a **dynamic** question evaluation system, leveraging **lemmatization** and **similarity** scoring to categorize user interactions
- Integrated **Google Gemini** using an API for AI-driven landlord personalities, improving user engagement by simulating diverse landlord behaviours through **React**

**Personal Website** | *HTML/CSS, JavaScript, Bootstrap*

September 2024 - Present

- Designed and developed a personal website from scratch using **HTML**, **CSS**, and **JavaScript**
- Utilized the **Bootstrap** framework to allow for easy "**mobile-first**" display
- Implemented **interactive** features and animations with **JavaScript** to enhance user engagement

### TECHNICAL SKILLS

**Languages:** Python, Java, Rust, Javascript, HTML/CSS, LaTeX

**Softwares:** Flask, React, Visual Studio Code, PyCharm, Python IDLE, Geany, Windows 11, Bash, GitHub, Overleaf, Copilot, Java AWT, Google Gemini, Bootstrap, Streamlit

**Libraries:** TensorFlow, NumPy, spaCy, OpenCV, MediaPipe, Java AWT

### INTERESTS/HOBBIES

- Soccer, Card games, Retro Nintendo gaming, Biking, Fantasy sports, Electric guitar