Yax Patel

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Education

McMaster University   September 2022 — May 2026

Bachelor of Engineering (B. Eng) - Computer Engineering   *Hamilton, ON*

- **Cumulative GPA**: 3.80/4.00, Deans' Honour List
- **Relevant Courses**: Data Structures & Algorithms, Logic Design, Principles of Programming

Technical Skills

Languages: Python, C, C++, C#, Java, JavaScript, TypeScript, HTML, CSS, Bash
Technologies: Flask, Django, NumPy, OpenCV, Node.js, React, Next.js, Express, MongoDB, SQL
Tools: AWS, Docker, Google Cloud Platform, Unix, Git

Experience

Software Developer   September 2023 — Present

McMaster Interdisciplinary Satellite Team   *Hamilton, ON*

- Collaborated within a **cross-functional** team to engineer satellite systems crucial for space research projects.
- Automated data collection during satellite pass-overs with **Python** scripts, enhancing operational efficiency by **63%**.
- Developed a task scheduler for the satellite firmware, designed to take timed commands and execute them within **millisecond accuracy**.
- Streamlined data analysis by integrating **InfluxDB** with **Grafana** for data visualization, enhancing data-driven decision-making by **14%**.

Software Engineering Intern   June 2023 — August 2023

SynPage   *Waterloo, ON*

- Independently led the development and maintenance of a Robotic Process Automation (RPA) desktop application, leveraging **React, TypeScript, Rust, and Python** to deliver a robust and efficient user experience.
- Enhanced development workflows by implementing optimizations that cut down browser extension build times by **80%**, leading to a more rapid iteration and deployment cycle.
- Collaborated on machine learning initiatives to improve **computer vision** capabilities within **Azure Cloud**.
- Meticulously cleaned and labeled data set, leading to improved object recognition accuracy by **23%**.

Projects

Kaku AI | *Next.js, TypeScript, Prisma, AWS*

- Designed and developed a SaaS application using **cloud-based solutions** with Vercel Cloud Services and **AWS RDS**.
- Implemented **best security practices** using React Server Components, improving application security by utilizing JSON Web Tokens.
- Designed and managed a scalable backend leveraging a **MySQL database instance on AWS RDS**.
- Integrated a CI/CD pipeline for automated deployment with continuous monitoring of performance, ensuring efficient operations of application systems.

Backend Bruno | *C#, Unity*

- **C# Unity** 3D video game with **17,000 impressions** during launch week and **500+ peak daily players**.
- Enhanced performance by isolating and removing avoidable updates each frame, effectively reducing CPU cycles.
- Developed a quest system with 50+ tasks and character interactions using **Object-Oriented Design**.