Kevin Wu

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Education

University of Waterloo **September 2023 – Present**
Bachelor of Computer Science - 90% / 3.95 GPA *Waterloo, ON*

- Scholarships and Awards: National Mathematics Scholarship **($15,000)**, President's Scholarship **($2,500)**
- Coursework: Algorithm Design, Compilers (Adv.), Functional Programming, Object Oriented Programming

Technical Skills

Languages: Python, TypeScript, JavaScript, C#, C++, C, SQL, Java, HTML, CSS
Libraries/Frameworks: Next.js, React.js, Flask, Node.js, Pandas, NumPy, SciPy, Selenium, OpenCV, Tailwind
Databases/Cloud: PostgreSQL, SQL Server, MongoDB, AWS, Firebase

Experience

Software Engineer Intern **January 2025 - Present**
NationGraph *San Francisco, CA*

- Built custom ETL pipelines with **table detection** and **LLM extraction** to optimize and automate processing unstructured PDFs into database, improving accuracy by **400+%** and reducing cost by **60+%** using **Python** and **Airflow**

Software Developer Intern **May 2024 – August 2024**
SaFuture Inc *Toronto, ON*

- Architected and built **40+** features, **25+** components, and **14** pages, bringing an equipment management app from **prototype to production** with a **React** frontend, **C# .NET Core** backend and **SQL Server** database
- Implemented performance optimization strategies using **React.lazy()** and **React Suspense** for dynamic code-splitting, reducing initial bundle size by **45%**
- Engineered robust pipelines for importing, exporting, and managing data via Excel, enabling offline equipment management. Built with **C#** and **VBA**, reduced manual input errors and **saved 3+ hours** of validation per sheet
- Automated PDF filling and generation on a report-writing platform for homeowners using **Selenium**, reducing manual efforts by **20** hours per week

Research and Product Development Intern **June 2022 – August 2022**
McMaster University, Supervisors: Dr. Rong Zheng *Hamilton, ON*

- Developed a **data-driven product** for swimmers to track important performance metrics using wearable sensors (MetaSensors), allowing coaches to track statistics of **entire teams**
- Collected and processed **10,000+** points of sensor data (euler angles, acceleration, etc.), and wrote scripts to analyze **7+** key swim metrics such as stroke count, lap average, underwater distance, using **SciPy, NumPy** and **Matplotlib**

Projects

GitInsights | *TypeScript (Next & Express), PostgreSQL* **@ Hack The 6ix**

- Created a **developer tool** using **Next.js, Express, and PostgreSQL** to improve developers' understanding of codebases, placing **2nd** out of **300+** participants
- Integrated **Llama 3.1** with **Ollama** and **RAG** to categorize commits through a tagging system and produce accurate summaries for code changes in each commit with GenAI
- Implemented an interactive visuals for users using **D3.js**, enabling users to track code activity across multiple branches

Memoir | *JavaScript (React), Python (Flask), MongoDB* **@ UofTHacks**

- Created a **social media platform** with account creation, user authentication, post creation, and data clustering
- Employed **Cohere** for semantic analysis, then processed with a **BIRCH Clustering** algorithm to group posts by content
- Implemented a connected node graph feature using **Scikit-learn** and **D3.js**, visualizing clustered data points

Solaris | *Godot, GDScript*

- Created a **2D platformer game** using **Godot**, with interactive elements, 10+ equipable items, and 50+ levels
- Built a variety of gameplay, ranging from game environment to boss levels, using a combination of **Godot Engine nodes** and scripts in **GDScript**