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Michael Ferreira

michaelferreira.me
GitHub: michaeljf07
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Education

Waterloo, ON, Canada **University of Waterloo** **Sept 2025**

- Bachelor's in Computer Science (BCS)

Waterloo, ON, Canada **Wilfred Laurier University** **Sept 2025**

- Bachelor's in Business Administration (BBA)

Technical Skills

- Languages: Python, Javascript/HTML/CSS, Typescript, Racket
- Frameworks and Libraries: Node.js, pygame, React.js, Next.js, pandas, scikit-learn, matplotlib

Work Experience

Software Engineering Intern **LocalReach** **Nov 2024 – Mar 2025**

- Collaborated with a team to build and maintain the company website using TypeScript and Next.js
- Contributed to the development of a computer vision AI system designed for real-time recognition on in-store TV displays
- Gained hands-on experience in building production-grade software under tight deadlines, with a focus on adaptability and rapid iteration

Charity CEO and Lead Developer **Baobab** **Dec 2024 – Aug 2025**

- Designed and developed the Baobab website using TypeScript, React, MongoDB, and Next.js, creating a seamless user experience for charities and donors
- Conducted outreach with local charities to onboard partners, understand their needs, and tailor Baobab's platform to maximize community impact
- Led a cross-functional team, overseeing project timelines, technical development, and decision-making

Projects

Baobab Charity Website
https://github.com/michaeljf07/baobab-website

- Built a **full-stack web application** using **TypeScript**, **React**, **Next.js**, and **MongoDB**, with a responsive, grid-based layout and dynamic routing
- Developed **user authentication** and **account management** with secure session handling
- Implemented a charity wishlist system allowing real-time updates and direct item tracking
- Designed and connected **MongoDB** databases to efficiently store user and charity data
- Integrated modular, reusable React components to support scalability and fast feature iteration

Forex Predictor
https://github.com/michaeljf07/forex-predictor

- Built **ML pipeline** predicting forex movements using **Python** and scikit-learn; engineered 90+ features from technical indicators (RSI, MACD) and market data (equities, commodities, bonds)
- Trained **Random Forest and Gradient Boosting models** with time-series cross-validation, achieving R^2 of 0.84 on EUR/USD next-day returns
- Automated data collection and created visualization suite for model evaluation

Atari Centipede Clone
https://github.com/michaeljf07/centipede

- Built a Centipede arcade game clone using **Python** and **Pygame**
- Developed responsive keyboard controls and game state management
- Applied **modular code structure** for easy feature expansion