

Yash Aanand

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EDUCATION

University of Waterloo

Bachelors in Computer Science (Honours)

Apr. 2029

Waterloo, ON

Selected Coursework: Object-Oriented Software Development, Designing Functional Programs (Advanced), Algorithm Design & Data Abstraction (Advanced), Linear Algebra, Tools and Techniques for Software Development

WORK EXPERIENCE

Software Engineering Intern

IrisGo (Irixion Corp)

Jan. 2026 – Apr. 2026

Mountain View, CA

- Shipped **task-automation** client features via **Electron**, **TypeScript**, and native **C++** over **OS-level IPC**
- Reduced **task execution failures** by **35%** using a local **Python** agent with **MCP** and **WebSockets**
- **Optimized** context **cache hit rate** by **45%** via **Go**, **PostgreSQL**, **Redis**, and **Docker**-based services

Software Developer Intern

Micromatic Grinding Technologies

May 2025 – Aug. 2025

Bangalore, IN

- **Reduced licensing costs by 85%** by replacing legacy CNC interface with a custom **Windows** interface
- Achieved **under 10ms latency** via **Python** threads and **C++ FOCAS API** for real-time CNC data
- **Scaled UI to 40+ production screens** using **React** to simulate end-to-end workflows across machines
- Delivered **full-stack** system with **FastAPI** and **GitHub Actions CI/CD** to replace **FANUC** controllers

Software Engineering Intern

Parkquility

Aug. 2023 – Sep. 2023

Bangalore, IN

- **Shipped** full-stack features with **React**, **Java**, **Flask**, and **MongoDB** to accelerate client deliverables
- Reduced **server resource usage** by **25%** by profiling and refactoring **Express.js** and **Java** service endpoints
- **Containerized** services with **Docker**, migrated legacy JS to **TypeScript**, and deployed via **GitHub Actions**

SELECTED PROJECTS

VisuaReader | *Python, Mediapipe, OpenCV, React, FastAPI, Electron*



- Used **OpenCV** and **Mediapipe** to enable **hands-free** reading via **blink detection** for motor-impaired users
- Leveraged facial landmark **ML models** to track over **468 facial** and **40+ eye** region points
- Achieved **sub-1s responses** and **94% accuracy** via **EAR**-based detection using **Mediapipe** and **OpenCV**

Taxbot | *Next.js, TanStack, OpenAI Functions, Vercel AI SDK*



- Built a tax-agent app using OpenAI Functions to handle **25+ dialogue flows** for scenario-based queries
- **Prompt-engineered** an OpenAI LLM with **1,000+ prompts** via **Vercel SDK** and **Next.js** Edge Functions
- Configured **30+ financial outputs** for personalized simulations and structured tax summary generation

ClusterHex | *JavaScript, jQuery, MongoDB, Express.js, AWS, Heroku*



- Developed a full-stack location review app with secure login, session handling, and user-level **access control**
- Enabled **real-time** map updates using **Mapbox APIs** and **AJAX**-based **geocoded** event polling
- Deployed on **Heroku** with **MongoDB** hosted on **AWS EC2**, supporting **100+ concurrent user** sessions

HashChain | *JavaScript, Node.js, MySQL, React, SHA256*



- Engineered a custom **blockchain ledger** using **SHA256** to track and verify **500+ product** transactions
- **Hashed** transactions and stored chain state in **MySQL** with block integrity checks on every write
- Integrated **QR-based lookup** to trace product history and validate source authenticity

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C, C++, Java, Go, HTML, CSS

Frameworks: React, Node.js, Next.js, Express.js, FastAPI, Flask, .NET, Tailwind

Tools: MongoDB, PostgreSQL, Git, Docker, GitHub Actions, AWS EC2, GCP, Kubernetes.

Libraries: OpenCV, Mediapipe, TensorFlow, pandas, scikit-learn, Vercel AI SDK, Mongoose