

Utkarsh Gupta

✉ u2gupta@uwaterloo.ca

📄 utkarshg20.github.io

📧 @utkarshg20 📺 in/utkarshg20

Education

University of Waterloo | Bachelor of Computer Science

09/2023 - 04/2028

Wilfrid Laurier University | Bachelor of Business Administration

09/2023 - 04/2028

CAV: 84% / Involvement: Tech ⚡, UW Blockchain, BDO Case, Parachute Live Case

Work Experience

Yokogawa | Software Engineer Intern 🔗

06/2024 - present

Bangalore, IN

- Integrated **InfluxDB** and **Grafana**, enhancing real-time data monitoring and visualization, resulting in a **25%** increase in operational efficiency by providing system performance and operational status.
- Developed **Python**-based SCADA solutions for automation, leveraging scripting and control algorithms to streamline data acquisition and control processes, and improving system responsiveness by **20%**.
- Constructed KPI dashboards using **SQL**, **React**, and **HTML**, transforming static JSON data into dynamic visualizations for actionable insights through data tokenization, providing real-time performance tracking.

UW PM Club | Software Developer 🔗

05/2024 - present

Waterloo, ON

- Engineered full-stack apps, creating and debugging **10+** front-end and back-end components.
- Managed agile development cycles using **JIRA** and **Agile Scrum** methodologies, coordinating sprints and backlog grooming to ensure timely and high-quality project deliveries.
- Developed and maintained front-end applications using **React**, **HTML**, and **Tailwind CSS**, enhancing application performance and user interfaces by implementing interactive and responsive designs.

Projects

Backtrade | 🔗

04/2024

- Engineered a scientific backtesting framework using **Python**, leveraging robustness testing to enhance trading strategy reliability, delivering **20%** more accurate results compared to traditional backtesting.
- Optimized trading parameters using walk-forward optimization, adapting strategies to market changes.
- Simulated various market scenarios with Monte Carlo backtesting simulations, reducing potential drawdowns by **15%** and validating strategy robustness under various conditions.

CoinWise | 🔗

02/2024

- Engineered a financial reporting tool that analyzes cryptocurrency white papers, websites, utility, sentiment, historical data, and technical moves, generating detailed financial reports.
- Implemented **Apache Spark** with PySpark for optimized runtime performance, and asynchronous HTTP requests using **aiohhttp**, increasing data processing efficiency by **40%**.

LooLearn.AI | 🔗

10/2023

- Engineered a student-focused AI that provides content-specific solutions, enhancing study efficiency and academic content retrieval speed by **15%** using vector databases, AI, and **LangChain**.
- Employed advanced algorithms such as Retrieval-Augmented Generation & Relevant Segment Extraction for precise content retrieval and tailored notes creation.

Skills

Languages | Python, Java, C, SQL, JavaScript, HTML/CSS, Bash Scripting

Technologies | MongoDB, Apache Spark, TensorFlow, Scikit-Learn, React, Node.js, Express.js

Tools | MS Excel, Git, Docker, NumPy, matplotlib, pandas, Milvus, Kubernetes, Flutter

Certifications | Finance Fundamentals (Bloomberg), Markets Virtual Experience (J.P.M & Citi)