Sourish Das

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Education

University of Waterloo **Graduating April 2026**

Honours Bachelor of Computer Science (Co-op)

- **Relevant Coursework:** OOP · Data Structures & Algorithms · Linux · Compilers · Digital Circuits · Graph Theory

Technical Skills

Languages: Python, Java, TypeScript, JavaScript, C, C++, SQL, Bash
Databases: PostgreSQL, MySQL, MongoDB, Firebase, Supabase, Milvus
Frameworks/Libraries: Node.js, NestJS, Springboot, Flask, React, Pandas, SciKit, Matplotlib, Numpy
Technologies: Docker, AWS, Azure, Kubernetes, Git

Experience

Manulife **January 2024 - April 2024**

Software Developer Intern - Cloud Platform Team *Toronto, ON*

- Created a **Python** automation script using **Github API**, yielding a **35%** reduction in time spent managing repo access
- Optimized **CI/CD pipelines** in **Azure DevOps** to streamline deployment processes, enhancing development efficiency
- Effected a **15%** reduction in the team's infrastructure costs by leveraging **Docker** to package & deploy **Python** apps
- Enhanced system scalability by designing **Airflow DAGs** to migrate **2 GB** of custom data from **PostgreSQL** to **MongoDB**
- Ensured over **95%** IT inventory adherence across **2500+** servers by optimizing a DB Scanning Tool using **SQL & Python**

Baraka (YCombinator '21) **May 2023 - August 2023**

Software Engineer Intern - Customer Experience Team *Dubai, UAE*

- Increased total search requests by **17%** by implementing a semantic search feature using **OpenAI API** and **Milvus DB**
- Reduced search latency by up to **60%** for both lexical and semantic searches, leveraging **Meillisearch** and **NNS**
- Built a **RESTful API** to boost investments in dividend-paying stocks by **21.5%** using **TypeScript**, **NestJS** and **SQL**
- Saved **$10k/month** by developing an **ETL pipeline** to introduce new financial metrics using **Python** and **SQL**
- Redesigned a microservice that detects fraudulent trades amongst **25k+** accounts, using **Java**, **Springboot** and **EC2**
- Optimized data storage and retrieval mechanisms by integrating **AWS S3** services, reducing data fetch time by **30%**

Activities

UW Quantitative Finance Design Team **May 2023 - Present**

Quantitative Developer *Waterloo, ON*

- Improved trading strategy performance by developing a back-testing engine using **Python**, **NumPy**, & **Scikit-learn**
- Researched **Cross-Exchange Arbitrage** opportunities between **Binance** & **Poloniex** to find **25+** profitable pairs of coins
- Achieved **89%** buy/sell signal accuracy using a **SMA Crossover Strategy** with the help of **Python**, **Pandas** & **Matplotlib**

UW Satellite Design Team **September 2022 - May 2023**

Software Developer *Waterloo, ON*

- Created an ARO Request page with **React** & **Firebase** to reduce server-side incoming & outgoing response times by **40%**
- Refactored the satellite's user authentication and data retrieval, to reduce latency by **35%** and handle **500+** requests/hr

Projects

Snowmail | *TypeScript, NestJS, OpenAI API, Nodemailer, PostgreSQL, Next.js, TailwindCSS, Bootstrap*

- Snowmail is a web app with **50+** users that generates and sends personalized cold emails to a curated list of recruiters
- Reduced user time commitment by over **75%** and ensured reliable delivery to recipients by implementing **Nodemailer**
- Enhanced recruiter response rates by over **20%**, by fine-tuning the latest chat completion **OpenAI API** model

Bull Forecast | *Python, Streamlit, Yahoo Finance, Prophet, Pandas, Matplotlib*

- Bull Forecast is a web app that previews up to 1 year price forecasts on **2500+** stock and crypto holdings using **Streamlit**
- Implements **Monte Carlo** simulation to predict future lower/upper bound and mean prices for individual equities with an **81%** accuracy, allowing users to analyze price trends up to 1 year in the future with **Python**, **Pandas** & **Matplotlib**

RepMe | *Python, OpenCV, Mediapipe, Flask, MongoDB, ReactJS, TailwindCSS*

- Implemented image processing to accurately track reps of **5+** exercises in video streams using **OpenCV** and **MediaPipe**
- Achieved a rep counting accuracy of over **90%** by optimizing **Python** scripts through extensive testing and optimization