Param Shah

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Education

University of Waterloo — Waterloo, Canada
Bachelor of Honours Mathematics
Joint Honours Statistics and Computing — *Sep 2022 – May 2027*

- **Relevant Courses:** Object-Oriented Programming, Data Structures and Algorithms, Machine Learning, Portfolio Optimization Models, Derivatives, Stochastic Processes, Database Systems, and Linear Algebra.

Experience

Software Engineer Intern — May 2025 – Aug 2025
Causeway Capital Management LLC — *Dallas, TX*

- Built a scalable performance analytics backend in Python + SQL (factor/sector/security breakdowns, drill-downs, CSV/Excel exports) designed for downstream quant/ML signal consumption, enabling PM workflows across quant + fundamental strategies and cutting decision latency 60%.
- Architected an in-house orchestration platform using Airflow + FastAPI that unifies AI automation workflows and ML model dashboards, cutting deployment time by 60% and giving real-time visibility into production pipelines.
- Built ex-post performance analytics and ex-ante risk metrics into the internal PM portal, delivering real-time alpha attribution, tracking-error, and information-ratio dashboards that accelerated investment decisions.

President - Quantitative Research — Jan 2024 – Present
UW Stocks Club — *Waterloo, Canada*

- Led a 25-member team to launch an open-source Python toolkit for event-driven algo trading with modular broker adapters, real-time risk analytics, and plug-and-play strategy templates (Fama-French 5, Black-Litterman, SMA).
- Architected a Streamlit back-testing framework with tick-level rewind, walk-forward optimization, and portfolio dashboards, cutting validation cycles by 90% and becoming the club's go-to engine for rapid strategy testing.

Software Engineer Intern — Jan 2025 – Apr 2025
Siemens Healthineers — *Ottawa, Canada*

- Architected a cloud-based CI/CD pipeline leveraging AWS (EC2, S3, CodeBuild), Jenkins, Docker, and Kubernetes, reducing build and deployment times by 65% and accelerating release cycles by 40%.
- Integrated advanced Android Debug Bridge (ADB) workflows, including real-time log capturing, crash diagnosis, and automated device provisioning, reducing mobile testing turnaround by 50%.

QA Automation Engineer Intern — May 2024 – Aug 2024
Axonify Inc — *Waterloo, Canada*

- Streamlined automated testing workflows by deploying test environments with Docker and Kubernetes, reducing environment setup time by 35% and ensuring consistency across multiple test environments.
- Automated over 100 manual test cases using Selenium, reducing manual testing efforts by 60%.

Technical Analyst Intern — Sep 2023 – Dec 2023
Techtronic Industries — *Toronto, Canada*

- Developed an automation script for imaging new-hire laptops, resulting in 63% reduction in the time required.
- Developed a robust data and reporting system using Python, Tableau, and SQL, providing insights into product analytics, marketing funnels, and essential KPIs, benefiting the marketing, supply chain, and brand teams.

Projects

Skopeo AI — Aug 2025 – Present

- AI native spreadsheet engine. Open source spreadsheet platform with agentic AI for formulas, data cleaning, and analysis; delivering real-time, multi-user collaboration.

Algorithmic Trading Library — Jan 2025 – Present

- Python library that equips quants with modular trading tools, deep analytics, and plug-and-play templates—including Fama-French 5-Factor and Black-Litterman models—for rapid strategy deployment.

Technical Skills

Languages: Python, Java, C/C++, SQL , JavaScript, HTML/CSS, R
Frameworks: Flask, Django, FastAPI, PyTorch, Keras, PyQL, TA-Lib, Scikit-learn, Node.js
Tools/Platforms: Git, Airflow, Docker, Kubernetes, Azure, Jupyter Notebooks, Jenkins, Bruno/Postman, MongoDB