

SANTOSH PASSOUBADY

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github.com/ssantoshp

ssantoshp.github.io

EDUCATION

McGill University

Honours Mathematics and Computer Science

Montreal, QC (Graduating in April 2025)

- CGPA: 3.9
- Coursework: Linear Algebra, Probability, Algorithms & Data Structures, Software Systems

WORK EXPERIENCE

Stathera, Inc.

Software Engineer Intern - Data Platform

Montreal, QC (May 2023 - August 2023)

- Led the development of **competitor intelligence software** at a Series A deep tech startup.
- Architected and implemented a robust **ETL pipeline**, enabling seamless data ingestion and storage of **10 million** monthly data points with **CockroachDB** and **Prisma**.
- Accelerated data collection speed by **2x** through strategic **code refactoring**, **concurrency**, and **batch processing** techniques.
- Boosted data preprocessing runtime by **22%** by porting existing scripts to **Spark**, harnessing the power of distributed processing.
- Streamlined the ETL process by writing a **CLI** in **Go**, integrated with **Kafka** to communicate logs.
- Ensured **software quality** and **collaboration** by writing comprehensive **documentation** and establishing a **CI pipeline** with **Docker** for rigorous testing.

PROJECTS

ByteDetective | [Github](#)

- Created an AI-powered MacOS app for local **image search** based on visual descriptions **using Tauri**.
- Leveraged **Rust** and **Redis caching** to architect a high-performance search engine, ensuring **low-latency** retrieval and **efficient storage** of text embeddings.
- Designed an **intuitive interface** using **Svelte** with **TypeScript** for an enhanced user experience.

Tinytrade | [Github](#)

- Developed Tinytrade, a **high-performance** stock exchange powered by **C++** and **Boost**.
- Implemented **multithreaded websocket** communications for lightning-fast order transmission.
- Designed a robust **order-matching engine** for optimal performance in dynamic market conditions.
- Successfully navigated the complexities of multithreading through **lock-free data** structures.

Empyrial | [Github](#)

- Built an open-source **Python** financial **data analytics** package to efficiently backtest any portfolios in **5 lines**.
- Trusted by universities around the world, including **Georgetown University** and **ENSAE Paris**.
- Implemented **CI** with **GitHub Actions**, ensuring seamless integration of new commits to the package.
- **750+** stars on Github; **+160k** install; **470+** upvotes on Reddit; more than **24k** views on Medium

TECHNICAL SKILLS

Programming languages Python, C, C++, Go, TypeScript/JavaScript, Java, Rust, Bash.

Technologies Pandas, Numpy, Flask, Django, Cobra-cli, Prisma, Node.js, Svelte, Tauri, Figma.

Databases PostgreSQL, MongoDB, CockroachDB, Redis.

Dev Tools Git, GitHub Actions, GitLab CI/CD, Docker, Linux.