Johan Naresh

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EDUCATION

University of Waterloo
Computer Science and Finance, Bachelor of Computing and Financial Management (Honours Co-op)
- **GPA**: 3.94/4.00 | *Awarded President's Scholarship of Distinction*
- **Relevant Coursework:** Algorithm Design, Data Abstraction, Financial Markets & Data Analytics, Linear Algebra

EXPERIENCE

Software Engineer — Apr 2025 - Present
Marble Investments
- Built async **Python** pipelines to normalize NASDAQ/NYSE equities data with rate-limited retries and idempotent updates; standardized market cap, diluted EPS, and analyst estimates, cutting acquisition time **80%**.
- Designed **MongoDB** architecture with **indexed collections** and **upsert-based refreshes** to store and update key financial metrics (P/E, revenue, profit margins), enabling rapid retrieval for research workflows and dashboard integration.
- Developed a **Next.js + TypeScript** internal dashboard streaming live data for real-time portfolio analytics and screening.

Economic Research Analyst — Dec 2025 - Present
Sephira Institute - Public Sentiment Team
- Conducted lead–lag and rolling cross-correlation analysis on global equity and societal happiness **time series**, performed **data cleaning** and **data engineering** to construct a country-month panel and applied OLS residualization for robustness.
- Applied detrending techniques (log-differences, YoY transforms) to isolate medium- and long-horizon relationships.
- Collaborating with a Cambridge professor to develop hypotheses, stress-test assumptions, and validate **statistical** methodology.

Lead Web Developer — Oct 2024 - Apr 2025
Opportunities HQ
- Developed an end-to-end opportunity discovery platform in **HTML/CSS/JS**, deployed on **Vercel** with a lightweight, modular architecture that streamlined content updates and kept load times fast.
- Implemented dynamic filters + persistent bookmarks (**JSON + localStorage**), cutting time to find programs by **35%**.
- Integrated **SEO analytics** via **Google Search Console** and real-time user tracking with GoatCounter.

PROJECTS

⊞ Real-Time Gym Rep Counter | *C++, Node.js, WebSockets, Supabase*
- Built low-latency rep counting in **C++** using accelerometer and gyroscope streams and defining rep-detection logic (filtering, peak/valley detection, debouncing, timing constraints), with timestamped serial ingestion via vcpkg-managed deps.
- Developed a **full-stack pipeline** where, **Node.js** backend ingests high-frequency JSON sensor streams, validates and buffers events, and sends updates via **WebSockets** to a responsive HTML/CSS/JS dashboard with real-time state synchronization.
- Connected the dashboard to **Supabase** for live session state (counts, metrics) and added **computer-vision** features.

⊞ Personal Portfolio Website | *React, TypeScript, Framer Motion, Tailwind CSS, HTML Canvas*
- Built interactive portfolio using React and TypeScript with **Framer Motion** transitions and motion-based UI components.
- Implemented real-time 2D physics for asteroid motion using kinematic equations, integrating **HTML5 Canvas** with **React UI components** and shipping builds via **Vite (npm scripts)**.

⊙ ESG Mobile App - Finalist SMAC Competition | *Dart, C++, CMake, Gemini API*
- Built a **Flutter** Android ESG-scoring app in a team setting with barcode/photo/text inputs; integrated the **Gemini** API to generate product scores and explanations and display them in-app.
- Implemented device persistence for user preferences/history so settings and previously scored products remain across sessions.

Career Compass Coalition - Growth & Development | *Growth, Content Ops, Analytics, Static Web*
- Scaled student user base from **1,000** to **17,500+** across a college-access support platform; analyzed engagement data and iterating on content, timing, and channel strategy; led growth to **24,000+** social media followers.
- Led survey-driven newsletter production and managed the editorial pipeline for **14** student writers.
- Built and deployed the organization's first centralized web resource using a modern static site architecture.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, TypeScript, C++, C, HTML/CSS, Java, Dart
Frameworks & Libraries: React, Next.js, Flask, Pandas, TensorFlow, BeautifulSoup, Selenium, yfinance
Tools & Platforms: Git, GitHub Actions, Linux, PostgreSQL, MongoDB, Firebase, Vercel, Power BI, Excel, APIs (REST, LLMs)