SATVIK PRASAD

satvikprasad.com | github.com/satvikprasad | Nationality: US

EDUCATION

Georgia Institute of Technology — Atlanta, GA
***John H. Martinson Honors Program**, B.S. in Computer Engineering, Minor in Mathematics* — *Aug. 2025 – May 2029*

- GT Venture Capital Club, Cohort 5
- Member of the 'Terra Trends' Data Visualisation Team, *Big Data Big Impacts@GT*

Normanhurst Boys High School — Sydney, NSW, Aus
Valedictorian, Highest Graduating Rank in Australia — *Feb. 2019 – Oct. 2024*

EXPERIENCE

Synopsis Education — May 2025 – Present
Director + CTO — *Sydney, Aus (Remote)*

- Engineered front-to-back tech stack for student-portal, landing website, and CRM + CI/CD automations.
- Developed full-stack web application in Typescript, React, PostgreSQL + Supabase, Docker, Express.js & Redis with REST web services and AWS S3.
- Contributed to 34k+ Git-tracked lines of production code.
- Wrote custom model context protocol in Python + FastMCP for quick powerpoint ideation.

Cognito Tuition — Feb. 2025 – Aug. 2025
Mathematics Tutor + Educational Operations — *Sydney, Aus*

- Designed cutting-edge resources and examinations in LaTeX (+ TikZ).
- Taught HSC Mathematics Extension 1 & 2 (most rigorous Mathematics course in Aus).
- Shadowed top tutors in Australia for 40+ hours.

Virtusa Polaris — Aug 2022
Software Engineering Intern — *Sydney, Aus*

- Learned industry-standard SCRUM techniques in the software services sector.
- Designed full-stack internal communications platform in Vue.js, GraphQL and PostgreSQL + containerized using Docker.

PROJECTS

Peggiator | *Web-based, High Performance & Extensible Music Visualiser* — Jan 2025 – May 2025

- Used a self-derived WASM implementation of the Fast-Fourier Transform & Web Workers to decompose input audio, 4x faster than V6 implementation.
- Captured system audio using a helper-binary written in Swift and ScreenCaptureKit.
- Injected audio data into a Vite + React sidebar component for the DOM.
- Used WebGL for 3D rendering of manipulated audio waveforms.
- Shipped a production-ready Desktop-version using Electron.

Promptly | *World's 1st Prompt-Based Agent with System-Wide Control — Ergo Challenge @ HackGT25* — Sep 2025

- Used Omni-Parser pre-trained weights and RICO dataset to train a lightweight, local YOLO11n object detection model with 110x faster inference times.
- Utilised OpenCV for 50ms zero-shot text detection + pyautogui for system-wide control.
- Designed a feedback-driven LLM event loop for automatic task correction.
- Speech-to-text inference using PortAudio and gpt-4o-transcribe with $\sim$2ms inference times.

AWARDS

- Ranked **10th in NSW** for Mathematics Extension 2 (most rigorous course in Australia)
- Achieved a maximum ATAR of 99.95 (**Top 0.05% in Australia**)
- **High Distinction** in Australian Physics & Chemistry Olympiads, Silver Medal in Informatics Olympiad
- Awarded **Scientia Scholar** and **Best Mathematics Student in NSW** awards by the University of New South Wales

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), Typescript, HTML/CSS/LaTeX, R, Golang, Zig, Rust, WebAssembly
Frameworks: React, Node.js, Express.js, Next.js, FastMCP
Developer Tools: JIRA, Gradle, Git, Docker, NeoVim, AWS + any IDE you want me to learn
Libraries: pandas, NumPy, Matplotlib, Raylib, OpenGL, WebGL, torch, TensorFlow, transformers, Flask