Daniel Li

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Education

University of Miami — Coral Gables, FL
Bachelor of Science in Computer Science, Mathematics — *Expected May 2027*

Experience

Undergraduate Research Assistant — Feb. 2024 – Present
University of Miami — *Coral Gables, FL*

- Architected a full-stack migration of the StarExec web platform from a legacy Java EE codebase to Django, improving codebase maintainability and enabling future integration of Python based ML libraries
- Developed a cross-platform desktop application by porting a legacy visualization tool (IDV) to Electron, enabling offline access for 100+ researchers and improving UI responsiveness
- Implemented a grammar translation engine in Python that compiles raw BNF specifications into ANTLR4 targets, enabling the automated generation of high-fidelity JavaScript parsers for the TPTP language
- Hardened production infrastructure by deploying and maintaining the StarExec environment using Gunicorn and Apache, ensuring high availability and resource isolation via Podman

Projects

TPTP Editor | *TypeScript, VS Code API, Node.js, LSP, CI/CD, ESLint* — June 2025 – Aug. 2025

- Built a VS Code extension for the TPTP logic language using TypeScript and LSP; created a custom grammar to provide syntax highlighting and real-time error checking for 80+ formal logic researchers
- Designed an async engine to connect with remote logic solvers, using a Webview UI and Node.js to handle long-running background tasks without freezing the editor
- Automated the release process by setting up a CI/CD pipeline with GitHub Actions for Marketplace publishing; integrated Husky and ESLint to catch code errors before every commit

Blackboard Utility | *JavaScript, REST APIs, Jest* — Dec. 2024 – July 2025

- Engineered a recursive fetching engine and asynchronous API handler to automate the retrieval of 250+ course files, replacing manual document management with a single-click archive solution
- Designed real-time data overlays to integrate RateMyProfessors ratings and CaneLink schedules directly into the Blackboard UI via DOM manipulation and Chrome APIs
- Architected a secure state-management system using Chrome Storage to persist user session data and academic metadata, minimizing redundant network requests and improving load times

Tuitionary | *Django, PostgreSQL, Redis, TailwindCSS, OAuth 2.0, Git, Gunicorn* — Sept. 2023 – Oct. 2023

- Developed a full-stack scholarship matching platform that connects high school students with $1M+ in financial aid opportunities based on personalized profiles
- Improved search performance by implementing Redis caching to store and retrieve 1,200+ scholarship records without repetitive database hits
- Reduced user search latency for high-traffic queries by designing a relational database schema deployed on PostgreSQL with optimized multi-criteria filtering

Technical Skills

Languages: Python, Java, SQL (PostgreSQL), TypeScript, JavaScript, HTML/CSS, R
Frameworks: Django, Django REST Framework, React.js, Next.js, Node.js, Express, TailwindCSS, PyQt5
Developer Tools: Git, Redis, Docker/Podman, TravisCI, VS Code, Postman, ANTLR4, Firebase
Libraries: Gunicorn, BeautifulSoup, pandas, NumPy, Matplotlib, OpenCV, Pytest, Click