Daniel Liu

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EDUCATION

Louisiana State University   Baton Rouge, LA
Undergraduate Student, Computer Science   *May 2027*

EXPERIENCE

Undergraduate Research Assistant   Feb. 2025 – Present
Louisiana State University   *Baton Rouge, LA*
- Engineered a Python script using GitHub's GraphQL API to scrape and filter repository data, ensuring only high-quality, relevant entries for analysis.
- Curated and categorized real-world software bugs to uncover AI error patterns and evaluate LLM performance.
- Built Python data pipelines with Pandas, NumPy, and Matplotlib to visualize repository issue growth over time, highlighting lifecycle patterns and trends in open-source projects.
- Contributed curated datasets, repository analyses, and empirical findings used in the paper "A Large-Scale Study on the Development and Issues of Multi-Agent AI Systems," submitted to the IEEE BigData 2025 Workshop.

PROJECTS

Flourish | *Flutter, Firebase, Flask, Roboflow*   Nov. 2025
- Originated the project concept and led the team through ideation, planning, and execution during the hackathon.
- Delegated tasks across frontend, backend, and integration roles to maintain team alignment and steady progress.
- Debugged and validated the custom Flask API, ensuring consistent and reliable backend communication.
- Integrated the full pipeline by connecting Flutter interactions to the Python backend and linking it to the frontend to complete the end-to-end system, demonstrated to judges.

LevelUp Budget | *React, TypeScript, Next.JS, MongoDB, TailwindCSS*   Jan. 2025 – May. 2025
- Collaborated in a Kanban-based Agile team of five to design and build a gamified financial planning app using React and MongoDB.
- Designed user-centric UI components with responsive layouts using React and TailwindCSS.
- Developed real-time collaborative budgeting views integrated with MongoDB, enabling multiple users to update and view shared budgets simultaneously.
- Integrated CI workflows with GitHub Actions for automated testing and deployment.

NestCents | *React, TailwindCSS, JavaScript, VapiAPI, Python*   Mar. 2025 – Mar. 2025
- Led a full-stack financial assistance application for a hackathon to simulate a realistic real estate agent phone interaction that guides users through personalized recommendations.
- Designed and developed the frontend UI with TailwindCSS, making the design pleasing and understandable for users to see.
- Designed the front-end in React with jQuery-like component libraries for fast prototyping and used VapiAPI speech integration.
- Used Python to implement a web scraper in the backend, fetching all available housing in the areas and parameters users request.

COURSEWORK

- Advanced Data Structures
- Numerical Methods
- Database Management Systems
- Discrete Structures
- System Programming
- Software Testing
- Computer Organization & Design
- Programming Languages
- Compiler Construction

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, TypeScript, HTML/CSS, SQL, Bash, LaTeX
Developer Tools: Git, Linux, VSCode, Selenium, Trello, Eclipse
Frameworks and Libraries: React, Flask, Django, jQuery, Node, TailwindCSS, Pandas, NumPy
Productivity Software: Microsoft 360 (Word, Excel, etc.), Adobe Creative Cloud (Photoshop, Premiere Pro, Illustrator)