James Li

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EDUCATION

University of Southern California — **Expected May 2026**

Bachelor of Science in Computer Engineering and Computer Science — *Sophomore standing*

Presidential Scholarship recipient, Dean's List

GPA: 3.96

EXPERIENCE

Firefly — **March 2023 – Present**

Co-Founder/Software Engineer

- Single-handily built the business-critical embeddable widget and customer-facing dashboard website with React/Next.js, Typescript, and PostgreSQL, resulting in a win for Judge's Choice at LavaLab's Demo Night.
- Worked with project manager to develop a business model and determine the product's core valuable proposition.
- Collaborated with designer to create and refine a smooth and instantly understandable user interface.
- Found and onboarded new customers while maintaining personal relationships to collect valuable user feedback.

Upful.ai — **February 2023 – May 2023**

Technical Intern

- Worked with the CTO to build the backend analytics pipeline with AWS Glue and PySpark to track the efficacy of the product's coaching recommendations.
- Generated valuable insights into differing product effectiveness for various classes of users.

Consumer Affairs — **February 2021 – January 2023**

Data Analysis and Visualization Engineer

- Analyzed, cleaned, and processed government data sources with Pandas and Numpy into comprehensive and digestible datasets that were used to write articles and content, driving a notably high amount of engagement.
- Built a specialized system of Python programs to simplify the process of calculating state or city-level rankings with the US Census API, based on various qualitative attributes, like housing quality and safety.

SoFlo SAT Tutoring — **August 2021 – March 2022**

Software Engineer

- Developed a chat autoresponder on a Node Express server with configurable templates interfacing with the Thumbtack API to automate customer acquisition, which directly increased lead retention rates and search ranking while eliminating all manual labor from initial lead messaging.
- Automated the generation of SAT answer explanation courses on Teachable from videos uploaded to Loom using Puppeteer and Node.js, reducing excessively tedious work and creating another avenue of customer acquisition.

PROJECTS

Infinite Procedural Terrain Generator | *C++, OpenGL, CMake* — **October 2022**

- Uses multi-threading to efficiently generate a landscape in a low-poly art style.
- Wrote a custom Poisson Distribution module, allowing for concurrent chunk generation with no loading time.
- Created a purpose-built mesh generator to seamlessly stitch together discrete Delaunay Triangulations.
- Implemented a flexible and extendable interface for the rendering of arbitrary heightmap generation methods.

WordleStat | *JavaScript, MongoDB, Node.js, Express, React, Bootstrap* — **January 2022**

- Displays aggregated Wordle statistics for each day in simple, readable charts. Reaches thousands of users per month while ranking highly on search engines.
- Queried scores from the Twitter API with Express and Node.js, then analyzed and stored scores in a MongoDB NoSQL database, with which the server implemented a RESTful API to serve collated data to the front-end site.
- Created a static front-end website with React and Bootstrap, including graphs and charts animated with D3.js and differing layouts to optimize for both desktop and mobile.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C++, Java, HTML/CSS, SQL
Frameworks: React, Next.js, Node.js, Qt/QML, PySpark, d3.js, Bootstrap, Puppeteer, Plotly, Swing
Technologies: AWS, PostgreSQL, MongoDB, OpenGL, WebGL, Linux, Git, Cloudflare, AWS Glue