# JAMES LI

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#### **EDUCATION**

## **University of Southern California**

**Expected May 2026** 

Bachelor of Science in Computer Engineering and Computer Science

GPA: 3.96,

Presidential Scholarship recipient, Dean's List.

**Relevant coursework**: Data Structures, Embedded Systems, Embedded Systems, Linear Algebra, Differential Equations, Discrete Math, Multivariable Calculus, Data Structures, Algorithms, Computing Systems, Distributed Systems

#### **EXPERIENCE**

BottleUp May 2023 – Present

Software Engineer

- Responsible for the development of business-critical user and vendor mobile apps with React Native in TypeScript while collaborating directly with the CEO to offer improvements and refine the product.
- Hired and managed junior developers to assist in the development of front-end components.
- Created the payments integration, responsible for all incoming revenue and outgoing vendor payouts.
- Developed a secure order fulfillment backend with PostgreSQL and Typescript, guaranteeing fast and private storage of user data while preventing race conditions from concurrent operation and unexpected cancellations.

Al Insurance June 2023 – July 2023

OA Tester

• Uncovered fundamental bugs and crashes in the company's new insurance application platform, which would otherwise have permanently corrupted customer data.

Firefly March 2023 – June 2023

Co-Founder/Software Engineer

- Built the product's 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.

Upful.ai January 2023 – May 2023

Technical Intern

- Worked with the CTO to build the backend analytics pipeline with AWS Glue and PySpark to track the successfulness 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 Analyst

- 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 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 test 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.

## TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C++, SQL, Java, GLSL, HTML/CSS

Frameworks: React, Next.js, React Native, Node.js, Qt/QML, Pandas, Numpy, PySpark, d3.js, Bootstrap, Puppeteer, Plotly

Technologies: AWS, PostgreSQL, Stripe, MongoDB, Stripe, OpenGL, WebGL, Linux, Git, Cloudflare, AWS Glue