

# Frank Tucci

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## EDUCATION

**California Polytechnic State University – San Luis Obispo (Cal Poly)**

GPA: 3.86

*Bachelor of Science in Computer Science*

*June 2024*

## TECHNICAL SKILLS

**Languages:** JavaScript, Python, C/C++, Java, SQL (Postgres), HTML/CSS, SAS

**Frameworks:** React, Node.js, Express, PyTest, Jest, FastAPI

**Developer Tools:** Git, Firebase, MongoDB, Supabase, Vercel, Figma, Azure

## EXTRACURRICULAR

**Software Engineer** - Systems Optimization Club | *Java, AnyLogic*

September 2022 – March 2023

- Collaborated to write a Java agent-based simulation of iFixit packaging operations to guide plans in creation of a new facility layout, relying on OOP principles.
- Implemented and tested different statistical distributions to realistically model customer delivery orders.
- Designed and coded a real-time AnyLogic dashboard comparing simulated versus target employee productivity.
- Identified bottlenecks and tested possible fixes leading to 65% increase in projected package throughput.
- Presented recommendations to iFixit management.

## PROJECTS

**DOT Trade Network Research** - Senior Project | *Python, JuPyter* | [Link](#)

March 2024 – June 2024

- Used Matplotlib and Pandas in Python to store and visualize US commodity trade data in a shared Jupyter Notebook.
- Leveraged NetworkX to create a graph model of point-to-point commodity movements.
- Wrote a Python algorithm to simulate disruption events and their effects in the constructed US trade model.
- Presented findings at Cal Poly's Senior Project Expo.

**Item Giveaway Website** | *JavaScript, MongoDB, React, Azure, Git* | [Link](#)

September 2023 – December 2023

- Collaborated to create a giveaway website using Node.js, React, Express, and MongoDB, incorporating user authentication and Google Maps integration.
- Use Faker-JS to generate realistic looking API calls on a test MongoDB database, resulting in a more robust test suite.
- Wrote backend JavaScript code to filter listings by location and attributes from user-supplied query parameters.
- Wireframed user profile page in Figma, incorporating optional profile photo and biography, and translated it into clean, performant React code.

**Text-based Sports Simulation Game** | *Python, SQL, Supabase, Vercel, Git* | [Link](#)

March 2023 – June 2023

- Wrote several REST API endpoints in FastAPI and associated documentation in Python that allows a user create and edit players and team information.
- Developed a custom simulation engine in Python that exports realistic play-by-play data in JSON format.
- Profiled common SQL queries and added indexes that improved performance on the most common database operations.