

# Zach Cramer

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## EDUCATION

### The University of Texas at Austin

May 2025

*B.S. in Computer Science*

GPA: 3.6

- Relevant Coursework: Algorithms, Operating Systems, Computer Architecture, Machine Learning, Data Structures, Discrete Math, Probability, Statistics, Linear Algebra, Competitive Programming, Akuna Capital 102
- Honors & Awards: Placed first at Jane Street Puzzle City, Dean's List
- Organizations: Texas Blockchain Engineering, Texas A4C

## EXPERIENCE

### Amazon

Sunnyvale, CA

*Software Development Engineer Intern*

May 2023 - August 2023

- Developed a **full stack web app** for the Alexa Mobile team (**React, Typescript, Java**), centralizing data access and analysis, used by **100+ partner teams** in production.
- Optimized functionality for anomaly detection and business reporting, integral to monitoring the health status of over **80 billion** metrics per day.
- Innovated **AWS lambda integration** for swift **S3 data extraction**, accelerating real-time visualization.
- Implemented **global search** functionality, empowering users to efficiently navigate and leverage data insights.
- Collaborated cross-functionally with various teams including **Business Analytics, Mobile, and Research**, ensuring a holistic and user-centric approach to application development and data visualization

### HID Global

Austin, TX

*Software Engineer Intern*

July 2022 - August 2022

- Led the **automation** of the production cycle for radio frequency readers, resulting in a **30% reduction in production time**. Implemented a **Python** script for automatic timer functionality, which reported to the company **MySQL** database.
- Collaborated with international engineers to fix the *Saturn*, a machine responsible for **20% of RFID tag production** at the Austin location.
- Developed and debugged scripts that directly impacted production in an **Agile Scrum** environment.

### iD Tech

Remote

*Online Instructor*

June 2022 - August 2022

- Planned and integrated lesson plans, provided real time examples and projects in **Java, C++, and Calculus**.

## TECHNICAL SKILLS

**Tech-Stack:** Java, Python, C++, C, JavaScript, Typescript, Swift, R, SQL, MongoDB

**Technologies:** React, Rest APIs, Docker, Flask, AWS Lambda, AWS S3, Git, Spring, Scikit-Learn, Pytorch, Pandas

## PROJECTS

**No Car? No Problem.** | *React, Javascript, Python, Docker, Flask, SQL Alchemy* | <https://www.nocarnoproblem.net/>

- Engineered a **full stack web app** using **React, JavaScript, and Python** to aid Austin's car-free population by providing interactive access to public transit routes, stops, and nearby attractions with detailed information.
- Leveraged **RESTful APIs** for data aggregation, utilized **SQLAlchemy** for data management, and employed **Docker** for a consistent development experience.

**Kernel** | **Unix OS** | *C++, Docker, QEMU*

- Implemented preemptive **multithreading, virtual memory, Ext2 file system, and TCP/IP networking**. Managed interrupt and exception handling, and interfaced system calls.
- Incorporated **Reed-Solomon** correction for bit flips/loss to ensure reliable messaging on unreliable networks.

**Bankruptcy Prediction** | *Python, Scikit-Learn*

- Employed **Neural Networks, Decision Trees, Random Forests Ensemble, and ADABOOST Classifier** to determine whether or not a company will go bankrupt. Predicted bankruptcy with **97% accuracy** through creative feature engineering and rigorous data cleaning.