

# SHASHANK VEMURI

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## EDUCATION

### University of Michigan

*Bachelor of Science in Data Science*

Expected 2026

Ann Arbor, MI

**Relevant Coursework:** Data Structures and Algorithms, Discrete Math, Programming and Intro Data Structures

**Activities & Societies:** Alpha Kappa Psi Professional Business Fraternity, Michigan Investment Group, V1 Michigan

## EXPERIENCE

### Alpaca Markets

*Software Engineer*

April 2022 - October 2022

San Mateo, CA

- Engineered v2 of the official Alpaca **Python** SDK to allow developers to connect to the Broker API and build investment services such as broker-dealers, neobanks, and RIA's which led to a 35% increase in the number of outstanding live applications
- Spearheaded the creation of a GitHub repository with 10+ **Jupyter** research notebooks with step-by-step technical guides on how to use the v2 Alpaca Python SDK to build live algorithmic trading bots leading to over 10,000 new developer sign-ups

### Bloom (YCS21)

*Software Engineer*

October 2021 - January 2022

San Francisco, CA

- Single-handedly designed, developed, and launched a multiplayer virtual stock market game using **Next.js**, **Node.js**, and **Firebase** for over 100,000 teenage users to simulate any custom strategy or replicate popular portfolios in a risk-free manner
- Implemented an interactive learning platform with 300+ gamified mini-lessons on financial basics leading to a 27% increase in user engagement on the app and a 45% increase in the investing confidence of newly converted brokerage account customers

### Knowt

*Software Engineer*

August 2019 - October 2021

Lewes, DA

- Achieved a 64% decrease in bounce rate from the web app home page over 6 months by using **Next.js** to develop and A/B test 4 design iterations, each focused on showcasing the product's value proposition and strategically timing sign-up prompts
- Doubled the SEO Lighthouse score which resulted in increased web app traffic from Google by ~15,000 visits/month by adding mobile responsiveness, fixing performance bugs, and developing significant improvements to website speed with **JavaScript**

### FinX

*Software Engineer*

July 2020 - September 2020

Virginia Beach, VA

- Increased 1-month user retention rate by 32% using **React**, **Tailwind**, and **Node.js** to build new features such as a dynamic stock charting analysis similar to TradingView and a chatbot using **Dialogflow** for users to learn financial literacy concepts
- Developed a real-time news sentiment analysis dashboard and per-stock daily polls using **Flask**, **NLTK**, and **React Native**, introducing a gamified rewards system that engaged 65+% of 10,000+ daily active users and increased revenue by 5-figures

## PROJECTS

### Quantitative Finance

March 2020 - April 2023

- Developed and maintained a GitHub repository with over 1,800 stars and 300 forks focused on financial engineering, featuring 150+ **Python** programs for data gathering, manipulation, and analysis to help traders automate and improve their strategies

### TradeView

May 2020 - January 2021

- Created an interactive financial data web app with 2,500+ daily active users that displayed hundreds of stock market fundamental metrics, technical analysis signals, and customizable buy/sell ratings in real-time using **Python** and **JavaScript**

### cookbookCV

December 2020

- Built an iOS application using **Python**, **Flask**, **Swift**, YOLOv3 object detection, and the COCO dataset, to analyze user-uploaded grocery images, accurately identify ingredients, and dynamically suggest recipes in an effort to decrease food waste

## ADDITIONAL

- Writer on Medium about quant finance and trading stocks for over 4 million readers, recognized as a top 50 writer in Finance
- Poker player for the University of Michigan team, studying game theory and playing in tournaments against Top 20 colleges
- Enjoyer of a diverse range of sports including basketball, weight lifting, soccer, running, biking, swimming, and table tennis

## SKILLS

### Languages

Python, JavaScript, TypeScript, C++, HTML, CSS, SQL

### Technologies

React, Node.js, Express.js, Next.js, Flask, Django, Pandas, NumPy

### Software

Git/GitHub, Heroku, MongoDB, Postman, MySQL, Firebase