

# AMMAR FATEHI

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## EDUCATION

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### The University of Texas at Austin

May 2023

BS Electrical and Computer Engineering | GPA: 3.5/4.0

Minor in Business Foundations

**Relevant Coursework:** Algorithms | Data Structures | Software Design & Implementation | Digital Logic Design  
Linear Systems & Signals | Probability & Random Processes | Linear Algebra | Discrete Math

## SKILLS

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**Languages:** Python | C | C++ | JavaScript | TypeScript | ARM Assembly | SQL | Java | MATLAB  
**Frameworks/Technologies:** MongoDB | Express.js | Node.js | React.js | Git | AWS EC2 | Keil | HTML5 | CSS3 | LaTeX  
**Certification:** Applied Data Science with Python Specialization | Python For Everybody Specialization

## EXPERIENCE

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### Instok

Software Engineering Intern

Sept 2020 - Dec 2020

- Developed a discord bot using Python and MongoDB streams to notify users when in demand products are in stock.
- Utilized Node.js within a MERN stack to display product status on Instok website.
- Created a landing page using React that serves over ten thousand monthly users.

### Micromouse Robotics

Software Team Lead

Aug 2020 - Dec 2020

- Managed a team of 4 to develop a simulator for an autonomous maze solver for the Micromouse robotics competition.
- Implemented the A\* algorithm and a min-heap in Python to find the shortest route efficiently around obstacles.
- Utilized Pygame to build an interactive GUI to simulate the robot during the competition.

### Polaris Robotics

Founder and VP of training and recruitment

Aug 2018 - Dec 2019

- Mentored 30+ underclassmen in robot build, programming, and driving skills for the Vex Robotics Competition.
- Programmed robots in RobotC for teleoperated and autonomous control, including PID and path following.
- National ranking- 21/10,000+, International ranking - 48/15,000+.

## PROJECTS

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### NutriApp

JavaScript, React Native, Python, Flask, GCP

Oct 2020 - Nov 2020

- Created a mobile App that allows users to take a picture of food labels and receive ingredients information.
- Developed the back-end in Flask and store user data into an Azure SQL database.
- Implemented Google's Machine Learning Vision API to retrieve text from images.
- Collaborated with a team to practice version control and AGILE methodology.

### Trading Bot

Python, Pandas, Mathplotlib, AWS EC2

May 2020 - Sept 2020

- Developed and hosted a stock market bot on AWS EC2 that constantly executes paper trades.
- Optimized buy/sell signals based on given indicators such as MACD & RSI to maximize profits.
- Integrated with Alpaca API to fetch historical market data for back-testing of trading strategies.

### Trading Brokerage App

Python, Flask, SQLAlchemy

Jul 2020 - Sept 2020

- Engineered a paper trading brokerage API with a server client interface to host an Algorithmic trading competition.
- Implemented a Flask REST API to allow users to trade stocks and keep track of their portfolio.
- Utilized a SQL database to keep track of trading activity among competitors and create a leader board.
- Employed Doxygen to create user friendly documentation.

### Discord Bot

Python, SQLite, BeautifulSoup4, AWS EC2

Nov 2019 - Jan 2020

- Implemented a multi-functional Discord bot to manage and support a community of 70+ users.
- Tracked a variety of user inputs to generate the most accurate video to allow users to listen to music from Spotify and YouTube.
- Automated creation and configuration of private channels to facilitate communication between closed groups.