# Ashwin Kudva

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## EDUCATION

**UNIVERSITY OF TEXAS, AUSTIN**
BS, Computer Science and Mathematics, Turing Scholar
2018 - 2022
GPA: 3.75 / 4.0

## LINKS

Personal:// **ashwinkudva.com**
Github:// **shwinay**

## AWARDS

• Winner of the **Capital One** 2019-2020 Software Development Summit Challenge
• Lead Programmer for VEX Robotics Team 2019B - **6th in country** for Autonomous Programming
• Eagle Scout with Bronze Palm
• Honorable Mention at HackTX for **I Need Some Space**, a Chrome Extension using NASA API

## LANGUAGES

| | |
|---|---|
| Java | ••••• |
| C++ | ••••• |
| Python | •••• |
| Javascript | •••• |
| Golang | ••• |

## COURSEWORK

**TAKEN**
Operating Systems Honors
Artificial Intelligence Honors
Algorithms and Complexity Honors
Concurrency Honors Computer Architecture Honors
Data Structures Honors
Discrete Mathematics Honors
Probability and Statistics
Linear Algebra
Multivariable Calculus

**CURRENTLY TAKING**
Computer Vision
Compilers

## EXPERIENCE

### APPLE, INC | Data Engineering + SWE Intern
May 2020 - Aug 2020 | Austin, TX

- Creating a fast and parallel access API to supply and demand forecasting and product data using **GraphQL**, Teradata, and **Spark**

### APPLIED RESEARCH LABS | Machine Learning + SWE Intern
January 2020 - May 2020 | Austin, TX

- Built fast and parallel 3D reconstruction models of seabeds for positioning of underwater drones using visual odometry
- Used transfer learning to make custom ML models for pose estimation of underwater divers using **Tensorflow** and **Keras**

### VISA, INC | Software Engineering Intern
May 2019 – Aug 2019 | Austin, TX

- Implemented a worldwide monitoring system to track health of internal servers in realtime and with historical data using **Node.js**, **React**, and **Powershell**
- Built VisaGo, a customized link shortener for Visa's internal company-wide LAN using **SQL** Server and Node.js for fast and scalable link translation

### AIRLITE PLASTICS | Web Developer Intern
May 2016 – Aug 2018 | Dallas, TX

- Programmed backend servers, setup e-commerce shop, and maintained website to sell reusable cups for Again! USA, a branch of Airlite Plastics
- Migrated from legacy codebase to **MERN** Stack

## PROJECTS

### SUPPLY CHAIN FORECASTING | Data Science
Python | MySQL | Pandas | scikit-learn | Node.js
Implemented the ARIMA statistical model with **scikit-learn** to **predict** supply and demand for O'Reilly Auto Parts - achieved **94% accuracy** on 5 years of data. Created a dynamic website for storing part data and displaying predictions using **MySQL** and **Node.js**.

### MASSIVELY PARALLEL MINIMAX AI | Concurrency, AI
Golang | CUDA | C++ | Pthreads
Created a decision-tree based Minimax AI algorithm that runs in parallel using **Golang** Goroutines and the **CUDA** GPU API to play two player games such as Connect-4 and Checkers efficiently - looks ahead over 250 thousand states in less than a second.

### CHIP8 EMULATOR | Computer Architecture
Java | OpenGL | LibGDX
Implemented the CHIP8 Instruction Set in **Java**, including graphics and sound using **LibGDX** visual library. Supports Super CHIP 8, cross-platform desktop, **Android** and **iOS**. Also implemented custom ROMs in CHIP 8 assembly language for testing.

### MUNCH! | Web Development, Machine Learning
Tensorflow | Rust | React | Firebase
Recipe recommendation website that learns based on user preferences and uses a **custom recommendation system** to suggest dishes based on previous data. Made using **React** and **Rust**, and implemented a trained model using user data in **Tensorflow.js**. Uses **Edamam API** for recipes.