

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](https://github.com/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

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.

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**.

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.