

Ashwin Kudva

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EDUCATION

UNIVERSITY OF TEXAS, AUSTIN

BS, COMPUTER SCIENCE AND
MATHEMATICS, TURING SCHOLAR
2018 - 2022
GPA: 3.79 / 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

C++
Python
Javascript
Java
Golang	...

COURSEWORK

Artificial Intelligence Honors
Operating Systems Honors
Natural Language Processing
Data Mining
Stochastic Processes
Neural Networks
Algorithms and Complexity Honors
Concurrency Honors
Computer Architecture Honors
Compilers Data Structures Honors
Discrete Mathematics Honors
Probability and Statistics
Linear Algebra
Multivariable Calculus

EXPERIENCE

THE D.E. SHAW GROUP | SOFTWARE ENGINEERING INTERN

June 2021 - Aug 2021 | New York City, NY

- Building a library to implement OAuth flows for **fast authentication** throughout **company-wide dashboards and tools** for trading and market data

APPLE, INC | SOFTWARE ENGINEERING INTERN

Jan 2021 - May 2021 | Austin, TX

- Programmed scaffolding to automatically set up and deploy new and existing apps to **Kubernetes** clusters - implemented an **application priority system** to balance server load and resources
- Decreased developer overhead to deploy to production by **over 90%**

APPLE, INC | DATA ENGINEERING + SWE INTERN

May 2020 - Aug 2020 | Austin, TX

- Created a fast and concurrent API to access and transform supply and demand product actuals data using **GraphQL**, **Teradata**, and **Spark** - resulted in a **10x speedup** from existing implementation, eliminating need for data caching

APPLIED RESEARCH LABS | MACHINE LEARNING + SWE INTERN

January 2020 - May 2020 | Austin, TX

- Built **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

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 dashboard for storing part data and displaying predictions using **MySQL** and **Node.js**.

AUTOMATED TRADING SYSTEM | DATA ANALYSIS, FINANCE

Python | AWS | Zipline

Created an automated trading bot that spotted intraday trends such as **Bollinger Bands** and **MACD** using Alpaca API for trading data analyzed every minute. Implemented Kelly Criterion to place smart bet amounts and to manage leverage. Created using **Python** and backtested with **Zipline**.