

# ARYA AGIWAL

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## EDUCATION

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**The University of Texas at Austin** - *Bachelor of Science, Computer Science. Minor in Business.*

May 2024

GPA: 3.98 (University Honors)

**Courses:** Algorithms, Operating Systems, Computer Architecture, Data Structures, Object Oriented Programming, Linear Algebra, Discrete Math, Competitive Programming, Business Law, Accounting, Management Info Systems

## EXPERIENCE

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**Verizon** – *Product Engineering/Development Intern; Dallas, TX*

June 2022 – August 2022

- Designed a Jupyter Python script that computes relationships between over 100,000 customers' Wi-Fi receiver data and location information to identify and update geographical data usage trends every 6 hours
- Engineered Splunk visualization operations to filter through over 100 million datapoints every 12 hours
- Utilized Crontab to run Python scripted server alarm checks to identify new customer router performance issues and network outages efficiently, minimizing the time previously used to identify such issues manually

## LEADERSHIP AND ACTIVITIES

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**TX Convergent** – *Build Team Technical Lead Officer*

September 2021 – Present

- Developed website allowing small businesses to compare and review financial/technical business software
- Constructed digital platform that curates a feed of stocks based on user feedback and Yahoo Stocks API
- Designed user interface for digital platform in Figma, accounting for display differences across platforms

**Engineering/Computational Learning of AI in Robotics (ECLAIR)** - *Member*

August 2021 – Present

- Modeled and reprogrammed a robotic arm in PyBullet in order to train it to pick/place and move objects
- Optimized robotic arm URDF to accurately reflect the range of motion of the arm and servos' strengths
- Produced dataset of facial images to analyze in Python with Machine Learning to recreate facial detection

**ByteHacks 2020** – *First Place Winner*

- Prototyped a web [military inventory system](#) using Google Navigation API for ancient Roman Soldiers
- Implemented models of military weaponry into EchoAR to provide live web AR models of equipment

**Hack the World 2020** – *Third Place Winner*

- Modeled a [water quality sensor](#) that utilizes data from 7 separate sensors to produce one quality index
- Researched measurement systems for dissolved oxygen, fecal coliform, Nitrate, and various other factors to develop algorithm in Java that combines data into meaningful output

## PROJECTS

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**Wordle Solver** – *Partnered Research Project*

- Engineered an algorithm that figures out the next word to try for each round of the Wordle web game
- Scanned through list of weighted 5 letter words to break ties and identify remaining possibilities.
- Generated weights for words through character frequency probabilities and previous guess data

**Radix Converter** – *Independent Project*

- Converted numbers between any two radices in C, if the number can be represented in numerical digits
- Able to work around floating-point error to convert fractional values by manually computing values
- Prototyped new ASCII-based system to represent up to base 71 numbers in single digit symbols

## SKILLS + INFO

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- **Languages:** Java, C, C++, Python, HTML/CSS, Javascript (React Native), x86 Assembly, C#
- **Certifications:** CS IB C#, CS IB Python
- **Tools:** Jupyter, Linux, VSCode, Git, PuTTY, Pandas, PySpark, matplotlib, Figma
- **Interests:** Football, Writing (Book to be published), Music, Reading, Chess, French Horn, Weightlifting