

Justin Chai

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EDUCATION

Texas A&M University | Class of 2024

- B.S.: Computer Engineering, GPA: 3.63
- Relevant Coursework: Differential Equations, Calculus, Linear Algebra, Data Structures and Algorithms, Computer Organization

EXPERIENCE

Texas A&M Robotics Club | Computer Vision Team

2021 January - 2021 May

- Placed top three in Robomasters Competition
- Utilized projectile calculation and Kalman Filters using the **filterpy** library to predict and aim at the future position of target enemy robots to increase bullet accuracy
- Devised a process for isolating and reading depth information on a given target to aid in Kalman Filters and projectile calculations

PERSONAL PROJECTS AND HACKATHONS

HowdyHack Hackathon

- Worked with a team of 4 to utilize **Spotify API** and **Shazam API** with **Python** and create a program that curated a playlist for the user based on the recognized song

8-bit Tower Defense Game

- Developed a tower defense game in **python** using the **pygame** library to make an 8-bit game with **sprite** character artwork
- Structured and displayed the game's entities, maps, and game stats to apply programming concepts such as **objects** and **inheritance**

Django Database Website

- Used the **Django** library in **Python** and built a website to create user accounts and store them in a database

Blockus AI

- Created an **AI** using **Java** to play and compete against other AIs in the game Blockus.
- Competed with around 25 AIs, and reached the semi-finals

Discord Username Algorithm

- Replicated the Discord Username algorithm in C++ using the various data structures such as **AVL trees** and **binary trees**.

SKILLS

- Java, C++, Python, Javascript, Django, filterpy, pygame, API, MS Office Suite, UNIX terminal

AWARDS

Distinguished Student Award

2021 May