JOSEPH TAN

🌐 www.dghosef.me | ✉ jdtan638@gmail.com | in dghosef | ⦿ dghosef | ☎ 626 693 6386

Education

Stanford University   California
B.S. Computer Science   *Sept. 2020 – May 2024(Expected)*
- GPA – 3.91/4.0

Coding Projects

Automated Jazz Backing Track Generator | *C++, Context-Free-Grammars, Audio File Generation*
- Developed Context-Free-Grammar based music generation system
- Implemented grammar reader, music generation logic, and music-specific data structures

Fantasy Premier League(FPL) Team Generator(Work in Progress) | *Python*
- Built a FPL team generator - predicts which soccer players will perform well and assembles a team of 15 players with constraints
- Scraped fplreview.com for player statistics, accessed the official FPL API to supplement with more data, used Linear Programming to build optimal team under game-imposed constraints, and used Genetic Algorithm to make changes to team throughout season

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Experience

Research Assistant   June 2017 - August 2017
UCLA Micro and Nano Manufacturing Lab   *UCLA, California*
- Built custom high-resolution DXF to PDF file converter for laboratory website
- Developed software to interact with boat speedometer

Extracurriculars

Founded Robotics Team
VEX Robotics
- Started VEX High School Robotics Team
- Taught STEM skills(coding, applied physics, etc) to high school students
- Designed website, fundraised, organized competition enrollment, ensured robot would be completed in reasonable timeframe

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Relevant Coursework

Stanford University   Sept. 2020 - Present
Courses
- CS 106B(A-): Programming Abstractions – C++, Recursion, Data Structures, Object Orientated Programming
- CS 103(A): Mathematical Foundations of Computing – Discrete Mathematics, Formal Language Theory, Finite Automata, Regex, Complexity Theory
- CS 107E(In Progress): Computer Systems from the Ground Up – Bare metal programming, ARM Assembly, C, I/O, Computer Arithmetic,

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Skills

Languages: Python, C++
Developer Tools: Jupyter Notebook, Git