Joseph Tan

U.S. Citizen | (626) 693 6386 | **Email:** jdtan638@gmail.com
Github: github.com/dghosef | **Linkedin:** linkedin.com/in/dghosef | **Website:** www.dghosef.me

Proficient in C, C++, Python; **Familiar with** ARM Assembly, Lisp

Education

Stanford B.S. Computer Science *August 2020-June 2024(expected)*

Current Cumulative GPA - 3.91/4.0

Relevant Coursework
CS106B Programming Abstractions(A-): *C++, Recursion, Data Structures, Object Orientated Programming*

CS103 Mathematical Foundations of Computing(A): *Discrete Mathematics, Formal Language Theory, Finite Automata, Regex, Complexity Theory*

CS107E Computer Systems from the Ground Up(in progress): *I/O, ARM Assembly, Bare Metal C, Driver Development, Interrupts*

Experience

Research Assistant

UCLA Micro and Nano Manufacturing Lab *(June 2017 - August 2017)*

- Built high-resolution DXF to PDF file converter for circuit manufacturing website
- Helped create interface between laptop and boat speedometer for lab experiments

Robotics Team Founder

Founded high school VEX robotics team

- Taught STEM topics(basic programming, practical physics, etc) to high school students
- Started team, mentored students, developed website, raised funding

Technical Projects

Comper*(C++)*

Jazz backing track generator from chord progression and context-free-grammar based style file

- Generates a drum track, a walking bassline, and piano chord playing with jazz voicings
- Implemented grammar parser, music generation logic, midi file generation, and music-specific data structures

FPL Team Generator*(Python)*

Fantasy Premier League(FPL) team selection algorithm(**dghosef.me/fpl-writeup**)

- Scraped soccer player statistics from the FPL API and saved in Pandas dataframe
- Developed algorithm to predict future player performances based on past performances, upcoming fixture difficulty, etc
- Utilized linear programming solver to maximize predicted future performance levels under constraints of FPL rules to build team