Joseph Tan

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Education

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

Current 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): *Bare metal programming, I/O, ARM Assembly, C, Interrupts*

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 player future performances based on past performances, upcoming fixture difficulty, etc
- Fed predictions into linear programming solver to maximize predicted future performance levels under constraints of FPL rules

Experience

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

- Built custom high-resultion DXF to PDF file converter for circuit manufacturing website
- Helped write code to inteface a boat speedometer with a laptop for laboratory experiments

Robotics Team Founder Founded high school VEX robotics team

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

Skills

Languages(Proficient): C, C++, Python
Languages(Familiar): ARM Assembly, Lisp