David Choo

EDUCATION

University of Illinois at Urbana-Champaign

B.S. Computer Engineering 2020

CONTACT

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david-choo

SKILLS

Languages

- ●●●●● C/C++
- ●●●●● Python
- ●●●●● Typescript
- ●●●●○ Java
- ●●●●○ x86
- ●●●○○ C#
- ●●●○○ SystemVerilog
- ●●●○○ Mandarin

Technical

- ●●●●● Git
- ●●●●● Vim
- ●●●●○ GDB
- ●●●●○ React
- ●●●●○ LaTeX
- ●●●●○ Unity
- ●●○○○ Swagger

COURSES

Algorithms and Computation
Data Structures
Computer Security
Applied Cryptography
Computer Systems Engineering
Virtual Reality

EXPERIENCE

SimBioSys, Inc. **May 2019 to Present**
Full Stack Developer Champaign, IL

- Developed TumorScope, a web application using **Typescript**, **React**, and **Swagger** for oncologists to efficiently select effective neoadjuvant cancer treatments on a case-by-case basis
- Used data visualization tools, such as **Victory** charting components, to present predicted residual cancer burden and pathological complete response chance for a given treatment
- Designed treatment comparison tool enabling physicians to visualize a tumor's response to various treatments over time

Infineon Technologies **May 2018 to Aug. 2018**
IC Research Intern Tewksbury, MA

- Analyzed processes to decrease DPPM rates for IC chips
- Developed and tested strategies to increase coverage of testable signals using Assertion Based Verification, especially in analog components
- Established procedures to efficiently insert analog defects using **C++** and **SystemVerilog**, thus facilitating measurements of controllability and observability
- Presented a new methodology for implementation into IC design and verification to better eliminate test escapes before tapeout

No Comment A Cappella **Aug. 2016 to Present**
Music Director — Treasurer Champaign, IL

- Arrange and teach music in weekly rehearsals (10+ hours/week)
- Fundraised $5k and allocated funds towards studio recordings, tours, and more
- Competitively perform as nationally ranked a cappella group

PROJECTS

PAC-MAN
- Created single-dot and multi-dot PAC-MAN path-finder using **Python** to implement various search algorithms, experimenting with state representations and path optimization

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- Worked with team of four to build a simple Linux operating system using **x86 Assembly** and **C**, implementing features such as resource management (memory virtualization and protection), scheduling, file management, and context switching

X-Men
- Collaborated with four peers to develop X-Men minigames in virtual reality using **C#** and **Unity**

log(Child)+ — *PilotPhilly Hackathon*
- Created educational Android app, using **Android Studio** and **Java**, to incentivize children to solve math problems in exchange for phone time
- Won "Best Social Impact App" Award

PitchStart — *HackRU*
- Crafted musicianship Android app, using **Android Studio** and **Java**, to play pitches when prompted by user's voice instructions; e.g. user says "C E G," and the app plays each note separately