

# David (Yong Hwei) Toon

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## EXPERIENCE

### Amazon Web Services

Sunnyvale, CA

*Software Development Engineer*

*Jan. 2023*

- Coming soon :D

*Software Development Engineer Intern*

*Jun. – Sept. 2022*

- Collaborated directly with customers and senior product manager to identify new and existing UX pain points.
- Constructed design docs exploring solution trade-offs by diving into technical, cost, and threat model analysis.
- Delivered production-quality UI solutions to reduce time spent on complex multi-step UX flows by up to 99.8%.
- Designed GET and PATCH APIs using Smithy 2.0 models, workflow diagrams, and various AWS cloud services.

## PROJECTS

### Spotters | Javascript

Sept. – Nov. 2021

- Web app that uses Spotify data to visualize analytics relating location, date, rank, & song characteristics.
- Designed and implemented a custom database with functional CRUD operations, as well as analytics APIs to compute and prepare data for the frontend visualizer.
- Utilized incremental computation design to reduce non-startup compute time of analytics APIs from 33s to 4ms.
- Driven a team of five and ran weekly sprint planning meetings to ensure timely delivery of end product.

### Classic Pong (demo) | C

Mar. 2021

- Embedded systems hardware build (ATMega1284 microcontroller, LED matrix, shift registers, joystick, etc.).
- Implemented advanced ball physics (speed variation and spin) and game mode support that enables user to play against “AI bot” with different difficulty levels or a second user.
- Designed an interactive menu with game mode selection and score keeping using LEDs and an LED Matrix.

### Quiz Application | C++

May 2020

- Simple CLI application used by students to prepare for the CS100 (Software Construction) final exam.
- Object-oriented design using decorator, factory, and strategy design patterns.
- Implemented customizable difficulties (winning score differences) and modes (True/False & Multiple Choice).
- Utilized a UML diagram during the design phase to visualize and improve the overall architecture.

## TECHNICAL SKILLS

Level: proficient | *ongoing*

**Programming Languages:** C/C++, JavaScript/TypeScript, Python

**Libraries/Frameworks:** React | *Express.js, Jest, Node.js*

**Databases:** MongoDB, PostgreSQL

**AWS:** *API Gateway, Cloud Formation, DynamoDB, Lambda, Service Catalog, Step Functions*

**Developer Tools:** Chrome DevTools, Git, VS Code

## EDUCATION

### University of California, Riverside

Riverside, CA

*Bachelor of Science in Computer Science*

*Sept. 2019 – Dec. 2022*

**GPA:** 3.71

**Relevant Coursework:** Compiler Design, Concurrent Programming and Parallel Systems, Database Management Systems, Design and Architecture of Computer Systems, Design of Operating Systems, Discrete Structures, Intermediate Data Structures and Algorithms, Intro to Artificial Intelligence, Intro to Big-Data Management, Intro to Embedded Systems, Intro to Information Retrieval, Intro to Software Engineering, Logic Design, Software Construction, Software Testing and Verification, Theory of Automata and Formal Languages

## LANGUAGE PROFICIENCY

**Native or bilingual:** English, Mandarin

**Limited Working:** Cantonese, Malay, Spanish

**Elementary:** Russian