

Daniel LAU

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SKILLS

- Language: C++, Python, Java, SQL
- Web: HTML, CSS, JavaScript, jQuery, Node.js, Express.js, EJS
- Network: Network measurement tools (Wireshark), Analysis of protocols (TCP, IP, HTTP)
- Security: Vulnerability analysis, Robust programming, Cryptography

EXPERIENCE

Computer Science Tutor

Jan 2020 – Apr 2020

University of California, Davis

- Tutored students in computer algorithm design (BFS, DFS, Dijkstra's, Greedy), and analysis (time and space complexity).

Software Engineer

Dec 2017 - Mar 2018

BOLANTEC

- Communicated with customers to understand their requirements for their inventory database software.
- Authored the product definition specification for software engineers.
- Developed an Android app in Java to improve efficiency by using QR code scanning.
- Fixed production errors by locating bugs within thousands of lines of Java source code.
- Provided technical training to users.

PROJECTS

Web application:

- Developed a responsive Lost & Found web application for UCD students with image uploads, Google map integration and database lookup.

L-Store Database System (Python):

- Developed a multi-thread, in-memory, durable and columnar database system.

AI projects

- Trained a Deep Q Network to play Pong in Python.
- Implemented A* search algorithm to find the shortest path in 3D Grids using Python.
- Utilized minimax algorithm with alpha-beta pruning to play connect 4 in Python.

User-level thread library (C): Developed a basic user-level thread library for Linux.

Simple Shell (C): Developed a simple UNIX shell with basic functionalities.

File System(C): Developed a FAT (File Allocation Table) based filesystem which supports up to 128 files in a single root directory.

EDUCATION

Bachelor of Science in Computer Science

June 2021(GPA 3.67/4.00)

University of California, Davis

