Nicholas Tran

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Education

University of California, Berkeley Class Of 2019

- **Majors**: Bachelor of Arts, Computer Science and Economics
- **Coursework:** Data Structures, Machine Structures, Game Design, Database Systems, Data Science, Algorithms, Artificial Intelligence, Network Architecture, Econometrics

Projects

Image Compressor with Spark

- Back-end image compressor that adapts images to lower-level files for extra space.
- Developed in **Python** and uses the **Apache Spark Framework** for distributed computing (Map/Reduce). 15+ hours

Bear Maps

- Back-end web mapping application in **Java** that assembles several images onto different resolutions, tested with **JUnit** development. 25+ hours
- Created features include zooming in/out (using **Quadtrees data structures**), dragging, and finding the shortest paths (using the **A-star algorithm**).

Relational Database Management System

- RDBMS stores fixed-size records (using **B+ Trees data structures**). Implemented range-scan, sorted-scan, and search. Uses a **query optimizer** to find optimal joins.
- Developed in **Java** and uses **JUnit Testing**. 30+ hours

Skip

- "Endless-runner" video game where the player can "skip" past enemies/obstacles.
- Created UI, physics, and randomly generated enemy spawns/collectibles.
- Developed from *scratch* using **Unity** and **C#** in a **team environment** through several life cycles before being completed. 30+ hours

Experiences/Volunteer Work

Academic Intern for CS61A: Structures and Interpretation of Computer Programs

- *Helped students complete various coursework* such as projects and labs alongside *helping students understand course materials* in U.C. Berkeley's intro computer science course.
- Participated during lab and office hours for approximately 2.5 hours per week for 13 weeks (**32.5 hours total, unpaid**)

Skills

- **Proficient Languages**: **Python**, **Java**, Javascript, **SQL**, **Ruby**, R, STATA, HTML/CSS
- **Software/Frameworks:** IntelliJ, JUnit, Git, **Unix**, **Rails**, React, Bootstrap,
- Motivated to learn new techniques and solve problems diligently
- Can speak English, Vietnamese, and Japanese.