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Robert Bui Filkin

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Portfolio: https://unruffled-borg-1b5734.netlify.app/

EDUCATION

- Graduated from University of California, Irvine with Cum Laude Honors (GPA: 3.75)
  - Bachelor of Science in Computer Science — Aug 2014 - June 2018
  - Bachelor of Science in Computer Game Science — Aug 2014 - June 2018
- Earned Certificates and Specializations at UCLA Extension:
  - Mobile Application Development (iOS, Android) Specialization — Sept 2018 – Aug 2019
  - Applications Programming Certificate (SQL, C#, Java, Adobe) — Sept 2018 – Aug 2019
  - Data Science Certificate — Jan 2019 – present
  - Web Development Bootcamp — Dec 2019 – July 2020

TECHNICAL SKILLS:

- Programming Languages: Javascript, C++, C, C#, Java, Python
- Programs: Unity, Microsoft Office (Word, Excel, Powerpoint), SQL, Adobe Creative Suite

WORK EXPERIENCE

- Tech Support internship – Akar Studios — Dec 2019 – Feb 2020
  - Designed templates for internal company documents
  - Re-organized and regularly updated the company website

PROJECTS

- **"A Knight's Honor" (https://scratch.mit.edu/projects/49202930/)**
  - Developed a 2D action game with a focus on narrative, in Scratch
  - Programmed player combat logic and enemy AI behavior
- **"Inversion" (https://scratch.mit.edu/projects/51327928/)**
  - Developed a puzzle platforming game with a focus on a world-switching mechanic, in Scratch
- **Competitive Card Game**
  - Created a 2-player competitive card game aimed at ages 5-10
  - Conducted numerous play tests and revised the game's design to ensure balance and fairness
  - Assembled a project pitch, as well as a script for a theoretical Kickstarter campaign video
- **"Snake" Multiplayer Adaptation**
  - Modified the game Snake to add 2-player online multiplayer functionality, using C++ and Java
- **GPS-integrated Social Mobile Game**
  - Designed a social mobile game utilizing GPS to connect users with other nearby users and events.
  - Constructed a paper prototype and filmed a demonstration video to showcase the game's GUI.
- **"Bomberman" Multiplayer Adaptation**
  - Modified the game Bomberman to add online multiplayer functionality, using Unity, C#, and Java
- **"Kat's Yarn" (https://kersplosion.itch.io/kats-yarn)**
  - Developed a 2D puzzle platformer game with a focus on rotational movement, using Unity and C#
  - Programmed tutorial prompts, an NPC conversation system, and implemented puzzle logic
  - Conducted public play testing sessions to optimize player experience and identify game design flaws.
- **Memory Management Model**
  - Constructed a model of 2Mb of bitwise memory in C++, utilizing bitmaps, bit masking, and arrays.
  - Implemented memory address translation from virtual to physical and vice versa, to save and access files
  - Extracted, tokenized and executed commands from external input documents.
- **Musical Alarm Clock**
  - Assembled an alarm clock using computer parts such as a breadboard, microcontroller, and LCD screen

- Programmed the alarm clock's logic and input/output using Atmel Studio. The clock ticks in real time, and the user can customize current time as well as the scheduled time of the alarm by using the keypad.
- Manually re-constructed a song "Twinkle Twinkle Litte Star" with wait statements and pitch approximation signals, sent to a small speaker unit.

HONORS & AWARDS

- Northrop Grumman Engineering Scholarship ($10,000) June 2014 – June 2018
- UC Irvine Dean's Honor List (3.5 or higher GPA) Sept 2014 – June 2018