Marco Lam

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EXPERIENCE

Game Design Intern | Call of Duty MW II (2022) | Infinity Ward   Jun. 2023 - Sep. 2023
- Cooperated and communicated with team of hundreds, eagerly gaining professional experience over 3 months.
- Designed and prototyped software while learning development pipeline, contributing 3 features.

Student Assistant | Space Zoologist | UC Davis (Remote)   Oct. 2021 - Jun. 2023
- Engaged in **Agile development with bi-weekly stand-ups and Trello tasks**, keeping in sync with project.
- Maintained communication with various disciplines to align project quality and schedules.

PROJECTS

Video Game Development | Developer   Ongoing
Designed, implemented, and debugged Unity C# code, achieving robust and realtime performance.
- Organized hierarchies and behaviors across 100+ files, using OOP and SOLID principles.
- Translated requirements and designs into logic, pseudocode, and then C# architecture.

Optimizations for Algorithm | Software Contributor   Jun 2024 - Ongoing
Community collaboration to improve an existing implementation of graph algorithms.
- Proposed logic improvements using data structures in Python, to avoid expensive memory copies.
- Identified critical oversight and implemented prototype solution to reduce algorithmic complexity.
- Leveraged performance profiling tool Scalene to focus optimizations on performance bottlenecks.
- Shared and tracked changes through Github, facilitating distributed development.

Rhythm Game Discord Bot | Software Developer   Feb. 2021 - Late 2023
Informational bot on messaging platform Discord, using discord-rewrite Python library.
- Processed thousands of song data from 100+ rhythm games, speeding up query responses to under 1 second.
- Collaborated to format raw data into csv with multi-layered attributes, enabling automated back-end.

Mini Search Engine | Student Software Developer   Nov. 2022
Solo university Python project for Information Retrieval.
- Implemented multi-threaded web crawler, improving crawl speed over a host of 200k+ pages.
- Implemented two-pass inverted-index with tf-idf scoring, speeding up result time from seconds to <200ms.

EDUCATION

University of California, Irvine Graduate
B.S. Computer Science   Oct. 2021 - Mar. 2024
B.S. Computer Game Science   Sep. 2020 - Mar. 2024

SKILLS

Technical Languages: 5+ years C# | 3+ years Python | exposure to C++, JavaScript, Lua
Other: Github | OOP | Problem Solving | Debugging | Performance Optimization