Shreyas Lad

slad0716@gmail.com / (925) 818-9440 / [Address], Dublin, CA

Summary

Driven and incredibly motivated student looking to explore. Strives to work with other people to learn and build in new and challenging environments.

Experience

Head of Internal Affairs

Youth Coding Workshops • Dublin, CA
05/2020 - Present

- Works with tutors across all languages to plan and implement new demos during workshops that cover a wide range of topics
- Directs other staff members to plan, implement, and execute large scale competitions to further engage and challenge students
- Plans out workshop demos and tutors students on new and complex topics
- Reached out to local middle schools and other programming organizations to establish a committee on youth programming and to give young students the opportunity to learn computer science

Curriculum Designer

Youth Coding Workshops • Dublin, CA
01/2020 - Present

- Worked with other tutors and curriculum designers to plan out a C++ curriculum and Java curriculum
- Worked with other tutors to revamp the existing Python curriculum - planning videos, designing warm-ups, and creating projects for students to complete
- Head tutor for Python, leads 3 other tutors during workshops

Skills

- Teamwork
- Problem Solving
- C
- Bash
- Communication
- Self Learning
- x86 Assembly
- Git
- Articulation
- Creative and Critical Thinking
- Python
- GitHub

Projects

Sonar — Type 1 Hypervisor — C/x86 Assembly

- Result of an experiment to solve a personal problem
- Instead of restarting a computer to test a new kernel build, Sonar aims to quickly and efficiently swap kernels out, then allow the kernel to pick up where it left off
- Virtualizes guest kernels and saves their full state when they need to be swapped out

Limine — x86 BIOS/UEFI Bootloader — C/x86 Assembly

- A highly configurable and customizable bootloader

- Intends to efficiently load kernels into 64 bit execution, passing all necessary information to the kernel to help it bootstrap the system
- Provides support for 4 and 5 level paging, higher half support, VBE framebuffer,s ACPI, and SMP
- Implements the stivale, stivale2, and Linux boot protocols
- Supports the ext2/ext3/ext4, fat32, and echfs filesystems

Slate — 64 bit x86 Operating System — C/x86 Assembly

- Implements support for modern hardware
- Paging, APICs, SMP, HPET and LAPIC timers, ACPI, AHCI, UART, PCI
- Aims to be virtualized by Sonar

Flame — 64 bit x86 Operating System — C/x86 Assembly

- First dive into OS development
- Drivers for legacy hardware including the PIC, PIT, VGA, and ATA drives

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Education

Engineering and Computer Science

Dublin High School
05/2022

- 3.93/4.00 Overall GPA
- Currently completing courses in computer science and mathematics
- Volunteered to teach and engage local middle school students in computer science

Computer Science

Foothill-De Anza Community College District
05/2021

- 5.00/5.00 Overall GPA
- Dual-enrolled along with high school courses
- Officer in the Foothill Computer Science Club

Languages

- English
- French