Eryl Kenner

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Employment History

System Software Engineer **2021 - Present**
Intel Corporation ***Folsom, California***

- End-to-end architect, project manager, and lead developer of a new set of tools for validating cache coherency and concurrency on upcoming SoC's. The tool sends concurrent traffic (memory, PCIe, DMA) for prolonged periods across cores/sockets in order to stress LLC cache, cause cache evictions, and hit corruption/deadlock scenarios. The tool is written in Python and C, and runs both on Linux and bare-metal.
- Architected and led development of a new concurrency framework for synchronizing OS-based applications by phase (setup, execute, verify, etc.) to maximize phase overlap. The tool enabled validation engineers to explore validation space by randomizing any application parameter in a steerable way via custom config files. The tool also provided a JavaScript visualizer which validations engineers used to see predicted and achieved phase overlap.
- Developed a PCIe test-card library in C which was used for bare-metal system-level emulation and post-si validation.
- Wrote a Python library for easily accessing SoC components over JTAG via APB-AP/AXI-AP protocols.

SSD Validation Intern **2020 - 2021**
Intel Corporation ***Folsom, California***

- Developed validation software to test solid-state drive features and NVMe spec compliance in Python.

Embedded Software Engineering Intern **2017, 2018, 2019**
Lime Rock, LLC ***Medford, Oregon***

- Designed, implemented, and documented a novel real-time, precise dead reckoning system for a four-wheel holonomic chassis. The solution used a combination of inverse kinematics and a custom-implemented Newton's method algorithm in order to prevent instability when solving the overdetermined system (in C)
- Created a point-to-point real-time graphical web user interface for a GPS controller
- Implemented a real-time C parser for decoding the NMEA 0183 communication standard

Artificial Intelligence Researcher **2018 - 2020**
Evolutionary Computing Systems Laboratory ***University of Nevada, Reno***

- Developed a VR, multiplayer network-based training simulation for naval officers in C# using Unity

Teaching Fellow **2018 - 2020**
Computer Science I ***University of Nevada, Reno***

- Facilitated hands-on lab sessions, assisting students with pointers, stack/heap allocation, structs, macros, etc.

Education

BS in Computer Science and Engineering
University of Nevada, Reno

Honors Student - 3.75 GPA, Minor in Mathematics, Minor in Digital and Interactive Games

Technical Skills

Python, C, C++, JavaScript, C#, bash, Git, Unity, LaTeX, SolidWorks, Object-Oriented programming, design patterns

Personal Projects

Space Age - *2019*

Space-themed co-op game where players keep all spaceship subsystems online as long as possible. (C# in Unity)

Planet Ball - *2018* - Winner of the "Games" category in the 2018 UNR Hackathon

Competitive game with a unique movement system where you grapple onto planets to change direction. (C# in Unity)