DYLAN LEIFER-IVES

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ABOUT ME

- Passionate about low-level programming and digital design, especially in C and Verilog. Obsessed with code performance, and clean architecture.
- Thrive in team settings and deadline-driven environments, which fuel my drive for creating better solutions and setting higher goals.

EDUCATION

California Polytechnic State University - San Luis Obispo **June 2025**

Bachelor's, Computer Engineering GPA: 3.36

- **Relevant Courses**: Semiconductor Device Electronics, Systems Programming, Computer Design and Assembly Language Programming, Digital Design, Electric Circuit Analysis & Lab I-III
- **Certifications**: LinkedIn C Certification, LinkedIn C++ Certification

PROJECTS

MICRO-OS (in progress) | C, x86ASM, UNIX **September 2023 - Present**

- Developing 8088-based OS entirely in C, with plans for real hardware implementation.
- Created FAT processing library and TUI binary file explorer for debugging and file system management.
- Employed object-oriented and data-driven design approaches throughout project.

Pen Plotter | C/C++, Microcontrollers **June 2023 - Present**

- Built on an ATmega328P, and a Raspberry-PI.
- Engineered and fabricated 2-axis CNC pen plotter while employed full-time at Ace Hardware.
- Developed machine interface in C; currently creating Raspberry Pi driver for remote printing.
- Leveraged bench experience for hardware and electrical system debugging and assembly.

C type language compiler | C **June 2022 - Present**

- Developed three iterations of a C-like language compiler, each incorporating increasingly formal study.
- Written entirely in C, focusing on self-guided learning and improvement.
- Currently standardizing architecture to compile to RISC-V ASM.

RISK-V OTTER | SystemVerilog, Verilog, RISK-V **September 2022 - January 2022**

- Developed reduced-instruction-set RISC-V computer in Verilog for a course.
- Exceeded course requirements by implementing a simple GPU and SPI module for external LCD interfacing.
- Project aligned with long-standing interest in computer architecture, fulfilling childhood aspirations.

TTF Decoder/Renderer | C, OpenGL, OpenCL **March 2023 - June 2023**

- Authored C-based decoder to interpret byte-encoded file formats, guided solely by official documentation.
- Gained in-depth OpenGL knowledge through development of rendering pipeline in project.

PROFESSIONAL EXPERIENCE

Ace Hardware **Employee: June 2023 - September 2023 | Fairfax, CA, USA**

- Provided customer support and advice, employing critical thinking to offer on-the-spot solutions for unfamiliar issues.
- Managed inventory and processed incoming products, necessitating high levels of focus and attention to detail.

Glumac **Electrical Engineering Intern: June 2022 - September 2022 | San Francisco, CA, USA**

- Designed and assessed electrical layouts for buildings, delivering code-compliant, precise designs with minimal supervision.
- Collaborated effectively within large teams, ensuring seamless alignment with original blueprints and timely delivery to contractors
- Improved company's legacy design tools through programming, achieving a daily time-saving of 30 minutes.

SKILLS & INTERESTS

Skills: Adobe After Effects, Adobe Creative Suite, CAD, Customer Service, Data Structures & Algorithms, JavaScript, Git, Linux/Unix, C/C++, SQL, Unity, Video Editing, Go, AutoCAD, Word/Pages/Docs, Verilog, FPGA, Printed Circuit Board (PCB) Design, Software Testing, Python

Interests: Compilers, Computer Architecture, Verilog, C, C++, Figure Drawing, Olympic Lifting, Hacking old technology, Linguistics, Systems Programming