Luka Filipović

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○ @FilipovicLuka793 | in Luka Filipovic

Profile Info

- Hardworking, committed and disciplined computer engineering student, software and hardware enthusiast looking to improve his skills and experience to excel in my field. Offering a plethora of different skills such as programming, design, creativity and plenty of others.

Education

School of Electrical Engineering, University of Belgrade   2021-2025 (Expected)
B.S. in Computer Engineering and Informatics

High School "Bora Stankovic", Bor   2017-2021

Projects

Kernel made for Operating Systems I class   2023
Multithreaded Operating System Kernel in C/C++ based on the RISC-V Architecture

- Dynamic memory allocation.
- Single-threaded with asynchronous context switching.
- Semaphore synchronization with a round-robin scheduler.

Nessy   2023
Computer system based on Nintendo's NES on FPGA

- A GPU that can draw a pixel, line, rectangle. The GPU outputs an 800x600 video to the screen over VGA and it uses the FPGA board's SDRAM to store the framebuffer.
- Two keyboard controllers that can be used to emulate up to 4 NES gamepads.
- My Responsibility: Making the CPU using the MOS 6502 instruction set.

Project for Operating Systems II class   2024
Modifying the xv6 kernel on the RISC-V Architecture

- Supports swapping using the pseudo-LRU algorithm and thrashing.
- To be more precise its modified to support a 39-bit address.

Skills

Programming Languages:
  C/C++, C#, Java, Assembly, TypeScript, SQL

Technologies & Tools:
  CMake, Git, GitHub, Linux, VSCode

Languages:
  Serbian - Native Proficiency, English - Fluent