

Roibu Radu

Junior Software Engineer

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EDUCATION

Politehnica University of Bucharest

Bucharest, Romania

Bachelor's Degree in Computer Science and Automatic Control

Oct 2022 – Jul 2026

- Relevant courses: Object-Oriented Programming, Data Structures and Algorithms, Algorithm Design, Operating Systems, Algorithm Analysis, Communication Protocols, Programming Paradigms, Digital Electronics

PROJECTS

DATAPLANE ROUTER IMPLEMENTATION | C | [GitHub](#)

- Dataplane router that supports **IPv4**, **ICMP** and **ARP** protocols . The router is capable of forwarding network packets based on their destination IP addresses, responding to ARP requests and ICMP messages .
- The program is designed to be efficient and lightweight, using data structures such as linked lists to manage routing tables and network interfaces. The router covers protocol implementation and low-level system design.

Mini Lib C | C | [GitHub](#)

- Developed a custom C library providing system call wrappers, memory management, process control, and I/O operations.c
- Implemented core functionalities **such as** malloc, free, open, close, read, write, and process control functions.
- Organized code into modular directories for runtime startup, memory management, I/O operations, and system calls.
- Utilized Makefile for efficient build automation, including compiling C source files, assembling startup code, and creating a static library (libc.a).

CLIENT-SERVER APPLICATION | C++ | [GitHub](#)

- Client-Server application that uses **TCP** and **UDP** sockets for communication. The server can handle multiple client connections and allows clients to subscribe to various topics with optional stored messages.
- Uses efficient data structures to store client/subscription information, implements **pooling** to avoid blocking I/O.
- The server handles reconnection of clients that have been disconnected. The application is designed to be efficient.

TECHNICAL SKILLS

Languages: C, C++, Python, Java

Databases and Tools: Git, Linux, Gradle, Bash/Batch Scripts, Makefile

Spoken languages: Romanian (native), English (business)