Matei Obogeanu

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About

Hardworking second year computer science student, with previous experience in the research field, working with DAQ systems and implementing algorithms for processing experimental data. Passionate about digital electronics and embedded systems, with acquired knowledge from the Digital Electronics and Microcontrollers courses, I am looking forward for an internship program to further develop my skills and learn more about these fields.

Education

- **Faculty of Electronics, Telecommunications and Information Technology** *2022 - present*
  at University POLITEHNICA of Bucharest. Pursuing a bachelor's degree in Computer Science
- **"Gheorghe Țițeica" Highschool** *2018 - 2022*
  Drobeta Turnu-Severin, Mehedinți

Experience

- **Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering** *2023-present*
  Research Assistant Măgurele
  – I am implementing waveform analysis functions in C++ for offline processing of scientific data and I analyze the results with the ROOT framework graphical tool. Repository link
  – I am designing DAQ systems for nuclear applications (event counters, analog waveform recorders) using Sci-Compiler on Open FPGA boards
- **Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering** *2023*
  Internship Măgurele
  – I implemented algorithms for analyzing radiation spectra. Repository link

Personal Projects

- **Microcontroller project** *2023*
  Implementation of an API
  – Tools & technologies used: Arduino, Bluetooth Low-Energy
  – In this project I have implemented an API that let's a phone connect to an ESP32 microcontroller via Bluetooth Low-Energy. After that, connection to the internet is established via Wi-Fi and the microcontroller sends back acquired data trough POST-REQUESTS methods back to the user's phone. Repository link
- **BMI Calculator** *2024*
  Medical application for determining someone's BMI and provide feedback
  – Tools & technologies used: Python, Flask, HTML, CSS
  – The app creates a form in the front web page of where the user can fill in personal data and after submitting it, the server will return the response on the same page with the calculated index and personal feedback with medical recommendations. Repository link

Technical Skills and Interests

Programming Languages: Verilog, C/C++, Python, Assembly(8051, ARM, 8086)
Developer Tools: Arduino IDE, Vivado, Sci Compiler
Frameworks: ROOT, capnproto, Flask
Cloud/Databases: MySQL
Areas of Interest: Science, Technology