

# Roe Shahmoon

## Computer Engineering



### Contact



ADDRESS

Israel, Tel Aviv



PHONE

052 - 5999 - 370



EMAIL

shahmoonroey@gmail.com



Links

[Roe - Portfolio](#)

[Projects - Overview](#)

[LinkedIn](#)

[Github](#)

### Skills

- Python
- C & C++
- Linux
- Assembly
- Verilog
- System Verilog
- VHDL
- HDL
- ModelSim
- Quartus
- DSP
- Typescript
- MySQL
- Docker
- Jira
- Git
- Github

### Language

- Hebrew: Native
- English: Fluent
- French: Proficient

### Occupation

→ **2024 Oct – Present**

**Embedded Engineer at ELTA Systems Ltd - Part Time Job**

- Implement real-time signal processing algorithms on the AMD Xilinx Versal VCK190 board.
- Develop pipelined and vectorized C++ kernels for AI Engines to maximize throughput and minimize latency. Validate functionality using golden models in Python and MATLAB.
- Apply FPGA design methodologies to integrate AI Engines, DDR memory, ARM processors, and external interfaces into a cohesive system.

→ **2023 Aug – 2024 Sep**

**Python Backend Developer at Circles AI - Part Time Job**

- Developed backend Python & Typescript applications as part of a startup team, Implemented version control using Git and actively contributed to GitHub repositories.
- Created and maintained Python classes for interacting with AWS databases, performing CRUD (Create, Read, Update, Delete) operations efficiently using MySQL.
- Participated in code reviews, mentoring junior developers, collaborated with frontend developers and product managers to deliver new features and enhancements.

### Education

→ **2020 Oct – present**

**B.Sc. Computer Engineering, Ben Gurion University, GPA 80.**

**Teaching Assistant at BGU University:**

- "Introduction to Systems Programming" - Conduct recitations on C programming language and Unix OS. Design course assignments and evaluate student's grades.
- "Introduction to Computers" - Guide hands on lab sessions focused on embedded systems using MSP430 microcontrollers. Helping students understand low level programming, assess students in real-time lab tests, given grades, and manage admission hours.

**Essential Courses :**

- Data Structures & Graph Theory & Algorithm Design: Sorting, BST, linked lists, hashtable, applying mathematical models of graphs and network using DFS, Dijkstra etc. Grade: 85
- Structure of Digital Computers - Microprocessor MSP430: DMA, ADC, DAC, Timers, Watchdog, Interrupts, Cache, Memory Management, Virtual Memory, UART. Grade: 88
- CPU Architecture & Laboratory design utilizing VHDL and SoC with Intel DE10-standard. Proficient in MIPS and RISC-V processor architectures, specializing in designing pipelined thread processor cores. Understanding of deep learning principles and their application in processor design. Grade: 86

→ **2011 - 2016**

**Alliance Tel Aviv High School**

- Participation in a medical Physics program for outstanding students with visit Blinson Hospital.
- Engaged in school's volleyball team, instructor in scout movement. GPA 109.

### Military Service

→ **2016 – 2019**

**Fighter and Commander in the 'Kfir' infantry brigade**

- Graduated from the commander's course led a team of 15 soldiers trained them to be fighters.
- Complex operations in challenging environments, training commander certificate of excellence.