

Sandzhi-Garia Ochirov

437(224) - 1774 | sandzhi.garia@gmail.com | Toronto, ON | [LinkedIn](#) | [Portfolio](#) | [Github](#)

Education

Bachelor of Engineering (B. Eng), Electrical Engineering

Toronto Metropolitan University

Sept. 2023 - Apr. 2027

Toronto, ON

Honors & Recognitions: Dean's List (Fall 2023, Winter 2024, Fall 2024)

Relevant Courses: Microprocessor & Control Systems, Signals and Systems, Electronic Circuits

Projects

CPR Assistance Device Competition

Nov. 2024

- Led a team of 5 multidisciplinary engineers and coordinated project timelines, delegated tasks, and ensured on-time delivery of the device, winning 2nd place out of 5 registered teams.
- Designed and assisted in developing C firmware for an Arduino-powered infant CPR training device, enabling real-time monitoring of chest compression depth and rhythm feedback.

DIY: Arduino-based Meteostation, Ultrasonic Rangefinder, Motion Sensor

Jun. - Aug. 2025

- Implemented a simple meteostation using C++ to measure CO₂, temperature, humidity, and pressure, featuring an interface with 4 display modes, button control, and CO₂ level graph visualizations.
- Built a portable ultrasonic rangefinder to measure distances to solid objects with ~90% accuracy.
- Created a motion detector with ESP32 that sends <1 s real-time Telegram alerts for remote monitoring.

Simple CPU Design in Quartus II with FPGA Implementation

Nov. 2024

- Designed a simplified CPU using VHDL, featuring a custom ALU, finite state machine (FSM), and peripheral components including 7-segment displays, decoders, and registers.
- Constructed 3 ALU cores with corresponding block diagrams and logic enhancements, with final data output deployed on an FPGA board.

PCB Design: KiCad & EasyEDA

Jun. - Aug. 2025

- Developed a custom ESP32 board with USB-C, buttons, SMD passives, and headers for prototyping, and a TDA2003A audio amplifier with optimized signal routing and output filtering.

Work Experience

QA Engineer Intern (Remotely)

May 2022 - May 2023

LASTH

Sunnyvale, USA

- Analyzed user/business requirements and functional specifications ensuring alignment with project goals.
- Improved testing efficiency by 20% through contributions to test plans and strategies.
- Reported and tracked bugs in Jira and coordinated with developers to ensure timely sprint delivery.
- Developed automated smoke and regression tests with Selenium WebDriver, identifying 15 major bugs.

Extracurriculars

Freelance Personal Trainer

Nov. 2024 - Present

- Developed fitness programs focused on weight loss, muscle building, and overall well-being.
- Led 1-on-1 and small group training sessions ensuring proper technique and safety.
- Managed client schedules and progress tracking with different fitness tools.

Technical Skills

AutoCAD | Fusion360 | MultiSIM | C/C++ | Arduino/Raspberry Pi | PCB Design | Altera Quartus II (VHDL) | EasyEDA | Python | MATLAB | KiCad | Embedded Systems | Soldering | Software Testing | MS Office |