

# Behruz Erkinov

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## EDUCATION

### New York University Abu Dhabi

*Bachelor of Science in Electrical Engineering*

### Presidential School in Tashkent

*High School Diploma*

Abu Dhabi, United Arab Emirates

September 2023 - May 2027

Tashkent, Uzbekistan

September 2019 - June 2023

## TECHNICAL SKILLS

**Programming Languages:** C, C++, C#, Python

**Tools and Frameworks:** STM32Cube, ESP-IDF, ROS 2, Unity, Git

**ECAD:** Cadence Virtuoso, ALTIUM Designer, KiCAD, EasyEDA

**HDL:** VHDL, Verilog

**CAD:** Autodesk Fusion 360, Onshape

## EXPERIENCE

### Undergraduate Research Assistant

*Center for AI and Robotics, New York University Abu Dhabi*

Abu Dhabi, United Arab Emirates

October 2024 - July 2025

- Designed and fabricated mechanical mounting and signal interfaces to integrate Inspire-Robots Dexterous Hands with the KUKA LBR iiwa 14 robotic arm for dexterous manipulation research.
- Built a single- and dual-camera vision-based human pose tracking pipeline using Google MediaPipe to enable real-time whole-body imitation learning for a humanoid robot.

### Embedded Systems Engineer Intern

*OYGUL*

Tashkent, Uzbekistan

June 2024 - August 2024

- Developed a Clustered SMS Gateway Server for 2FA client authorization.
- Developed a Clustered Multi-Party Call Server to enhance client privacy by utilizing multi-party calls, ensuring that the client's real phone number is never disclosed to third parties.

### Undergraduate Research Assistant

*Applied Interactive Media Lab, New York University Abu Dhabi*

Abu Dhabi, United Arab Emirates

October 2023 - May 2024

- Designed hardware for Haptic-based Dental Local Anesthesia Simulation.
- Developed the simulation used in VR motion sickness research.

## PROJECTS (MOST RECENT)

- ATRON: Awarded Second Place in Mubadala's Higher Education Student Competition.** Collaborated with a team of university students to develop an autonomous boat that removes floating trash from water surfaces. Designed the electrical power distribution system, control and guidance electronics, and communication algorithms. [GitHub](#)
- CharlieDeck32:** A minimalist handheld console built around an STM32 microcontroller and a Charlieplexed LED matrix for efficient GPIO usage. Runs retro-style games like Flappy Bird, Snake, Pong, and Tetris using custom low-level graphics routines. The reverse silkscreen features personal contact information, allowing the device to function as a hardware business card. [GitHub](#)
- StaticString:** A lightweight, fixed-capacity, stack-allocated string type for C/C++. Designed for memory-constrained environments where dynamic memory allocation is undesirable. Offers bounds-safe string manipulation, compile-time initialization, and zero heap usage. Ideal for embedded firmware and bare-metal applications. [GitHub](#)
- ValenTiny:** Designed and developed a heart-shaped development board featuring the ATtiny85 microcontroller. The board leverages V-USB to implement bit-banged USB functionality, enabling users to program it directly via USB and emulate HID devices without additional hardware. This development board doubles as a unique and customizable Valentine's gift. [GitHub](#)
- PixieClock:** Designed and built an open-source smart clock using ESP32-S3 that displays real-time clock data along with indoor and outdoor temperatures based on the user's location. Features include NTP time synchronization, IP-based geolocation, weather API integration, and LED segment display. Ideal for personal use or as a customizable gift. [GitHub](#)

## AWARDS

- Mubadala's Higher Education Student Competition 2025 - 2nd place
- Astana International STEM Olympiad 2022 - 1st place, Central Asia Robotics Champion
- Uzbekistan Computer Science Olympiad 2021, 2022 - 1st place, National Champion

## LANGUAGES

- English - Advanced
- Uzbek - Native
- Russian - Native