

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, KiCAD, EasyEDA, Autodesk EAGLE

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 and Snake 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