Bekhzod Anvarov

Software Engineer
Python, Rust, C, TypeScript/React

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SUMMARY

Computer Engineering graduate (MSc) from Politecnico di Torino with 5+ years of Python. I have built a Rust/Tauri desktop app, a full-stack React and TypeScript web app and a bare-metal C and ARM assembly game. Open to junior roles and internships in software engineering, on-site or remote.

EDUCATION

Master of Science in Computer Engineering (Cybersecurity track)
Politecnico di Torino, 2026

Bachelor's Degree in Computer Engineering
Politecnico di Torino, 2022

PROJECTS

Surplus Food Rescue Desktop App
Stack: Rust (Tauri v2), React, TypeScript, SQLite
Cross-platform desktop app without a Node.js server. Users reserve surplus food bags and schedule pickups.
GitHub: github.com/virtsudo/rust-rescuing-surplus-food

Surplus Food Rescue Web App
Stack: React, TypeScript, Node.js, Express, SQLite, Passport.js, REST
Full-stack single-page app with session-based authentication, a RESTful API and a two-server architecture.
GitHub: github.com/virtsudo/reactjs-rescuing-surplus-food

ARM Pac-Man on the LandTiger Board
Stack: C, ARM Cortex-M3 Assembly, LPC1768, 240×320 LCD
Bare-metal Pac-Man with GPIO joystick input, interrupt-driven pause and resume, and pixel-level LCD rendering.
GitHub: github.com/virtsudo/arm-pacman-game

RESEARCH EXPERIENCE

JEPA Representation Learning for Intrusion Detection on Real-World Drifting Network Traffic
Master's thesis, Politecnico di Torino, 2026
Supervisors: Prof. Guido Marchetto, Prof. Alessio Sacco, Cristiano Serra, MSc
Does a representation learned from unlabeled network traffic keep an intrusion classifier more accurate than raw flow features on traffic recorded years later?

- **Wrote** the full codebase in Python, including data loading and preprocessing, a JEPA model trained in PyTorch (CUDA), scikit-learn and XGBoost classifiers, and evaluation with metrics and plots.
- **Ran** it on MAWIFlow backbone traffic from 2011, 2016 and 2021 and fixed the benchmark's feature scaling.

Stack: Python, PyTorch (CUDA), scikit-learn, XGBoost, Polars, NumPy, Matplotlib

SKILLS

Programming: Python, Rust, C/C++, Java/Kotlin (Android), JavaScript/TypeScript, ARM Assembly (Cortex-M3)
Frameworks & databases: React, Node.js, Express, Passport.js, REST APIs, Tauri v2, SQL (MySQL, SQLite)
Tools & environments: Linux shell, Git/GitLab, JetBrains IDEs

RELEVANT COURSEWORK

- **Software Engineering:** requirements analysis, UML, agile, unit and integration testing, version control.
- **Web Applications I:** JavaScript, React, Node.js, Express, REST APIs, SQLite, authentication.
- **Computer Architectures:** pipelining, caches, ARM and 8086 assembly, embedded C on ARM boards.
- **System and Device Programming:** OS161 system calls, concurrent C/C++, Linux and Win32 APIs.

LANGUAGES

Uzbek (Native), Russian (C1), English (B2), Italian (B1)