

ALEXANDER VANKOV

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Junior Backend Developer | Linux & IoT Enthusiast

Backend Developer and systems enthusiast experienced in Python, C++, and building RESTful APIs. Proficient in managing Linux environments, Docker/Podman, and Bash automation. Passionate about IoT, hardware-software integration, and microcontroller firmware. A problem-solver thriving at the intersection of logical code and physical systems.

SKILLS

Programming Languages: Bash, C++, Python, SQL

Frameworks & Libraries: FastAPI, JWT Authentication, SQLAlchemy ORM

Databases & Containers: Docker, MariaDB, MySQL, Podman, PostgreSQL

Tools & IDEs: Figma, Git/GitHub, MySQL Workbench, pgAdmin 4, PyCharm, VS Code

Operating Systems & Networking: Linux (Fedora Workstation/Server), MQTT (Mosquitto), NetworkManager (nmcli), SSH, Windows

PROJECTS

Atrium – A Secure and Scalable RESTful API for Social Media 12/2024

- **GitHub:** github.com/alex-vankov/Atrium
- **Tech Stack:** FastAPI, PostgreSQL, SQLAlchemy ORM, JWT
- Designed and implemented scalable **RESTful endpoints** using **SQLAlchemy ORM** to manage clean database interactions, integrating robust **Role-Based Access Control (RBAC)** and secure **JWT** authentication mechanics for content moderation.

Match-Score 11/2024 - 12/2024

- **GitHub:** github.com/A2T-Team/Match-Score
- **Tech Stack:** FastAPI, PostgreSQL, SQLAlchemy ORM, JWT
- Built secure **API** endpoints with full **CRUD** operations for structured user accounts and requests, leveraging **SQLAlchemy ORM** abstractions for clean code readability and developing a comprehensive suite of **Unit Tests** to ensure complete endpoint reliability.

Forum API 09/2024 - 11/2024

- **GitHub:** github.com/Forum-API-Org/Forum-API
- **Tech Stack:** FastAPI, MySQL, MariaDB, JWT
- Developed backend routing and efficient **CRUD** functionality for forum categories and topics, backed by strict **Unit Tests** to prevent regressions and a custom credential-parsing mechanism to securely fetch database tokens from localized storage.

Self-Hosted HomeLab & System Automation

- Configured a dedicated local **Fedora Linux server** to host containerized services like **Home Assistant**, **Pi-hole**, and **Mosquitto MQTT brokers**, utilizing Network Manager (nmcli) for static IP mapping and

deploying custom Bash scripts to automate repository syncs, system cleanups, and C++/CMake project scaffolding.

IoT Telemetry & Environmental Logging System | Microcontroller Project

- **GitHub:** github.com/Alex-Van-19537/Arduino.git
- Developed **clean, object-oriented, state machine C++** firmware for Arduino platforms (Uno R3 / R4 WiFi / Nano) to capture real-time metrics.
- Integrated **physical telemetry** sensors with external SD card storage modules to log structural environmental shifts into custom CSV formats.
- Implemented an **MQTT client interface** to broadcast immediate **telemetry updates** over local networks back to a central broker.

EDUCATION

New Bulgarian University

Bachelor's in Informatics | Sofia, Bulgaria

10/2025 - Present

Telerik Academy

Alpha Python Track | Remote

06/2024 - 12/2024

"Dimcho Debelyanov" Secondary School

Secondary Education in Natural Science | Sofia, Bulgaria

01/2017 - 01/2022

WORK EXPERIENCE

Takeaway

07/2024 - 05/2026

Courier / Food Delivery Driver | Full-time

- **Maintained over 90% customer satisfaction rating** by ensuring safe, intact, and punctual deliveries under fast-paced, high-stress conditions.
- **Demonstrated exceptional reliability and resilience** by maintaining peak operational efficiency and accuracy across demanding **12-hour extended shifts**.

AmRest

07/2021 - 12/2022

Shift Manager & Certified Instructor | Full-time

- **Earned rapid promotions** from an entry-level role to Certified Instructor and Shift Manager within **8 months**, taking full leadership accountability for daily operations and teams of up to **10 personnel**.
- **Spearheaded technical training and onboarding for 10+ new hires**, ensuring seamless adaptation to strict company safety protocols, standard operating procedures, and cash-handling accuracy.
- **Optimized cross-team workflows during high-volume shifts**, successfully resolving **100% of high-stress customer escalations** while maintaining strict service-delivery timelines.

VOLUNTEERING & LEADERSHIP

"Dimcho Debelyanov" Secondary School

10/2018 - 05/2022

Event Host

- Managing event flow