

Janko Štrkalj

Backend & Software Engineer

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Professional Profile

- Recently graduated software engineer with hands-on experience across full-stack web development, IoT/embedded systems and AI-assisted automation.
- Delivered two client projects as a freelancer, from database design to deployment, with a growing focus on backend systems and applied AI.
- Experienced working directly with clients and designers, and supporting internal teams in a banking environment.
- Quick to learn new domains and technologies, and turn unfamiliar requirements into working software.

Skills

- Python (FastAPI)
- PHP (Laravel), JavaScript, HTML, CSS
- MySQL, SQLite, InfluxDB
- MQTT, IoT & Embedded Systems (Raspberry Pi)
- AI, ML, LLM APIs
- Git, REST APIs, Linux, Windows

Languages

- Serbian, English

Education

Bachelor of Engineering, Software Engineering
Faculty of Engineering, Kragujevac | 10/2019 - 09/2026

Specialized Program in Mathematics
First Kragujevac Gymnasium | 09/2013 - 06/2019

Organizations

- **Youth Club SKC**, member, student cultural activities and events | 02/2025 - Present
- **Neutrinos IT**, member, app development and local community projects | 01/2025 - Present

Experience

Neighborhood Energy Orchestrator (Dutch energy-tech client), Freelance | 03/2026 - 06/2026

- Built an IoT proof of concept for a neighborhood energy-orchestration platform, part of an innovation project funded by the European Regional Development Fund (ERDF).
- Developed edge software for two Raspberry Pi 4 devices and a FastAPI cloud orchestrator that coordinates solar panels, batteries, EV chargers and heat pumps to reduce grid congestion.
- Designed a simulation engine modelling hourly per-household consumption for 8- and 30-house districts under 100 kW and 700 kW transformer limits; with the orchestrator enabled, the system met the KPI targets of at least 15% lower transformer peak load and 20% higher self-consumption.

GRCentric (German-based startup), Freelance | 07/2025 - 12/2025

- Built a full-stack compliance-automation platform end to end in collaboration with a UI/UX designer, covering the PHP/MySQL backend, database design and front-end implementation; delivered an MVP the client went on to promote to its customers.
- Developed a Python background worker that processes queued document jobs from MySQL, with a lock against concurrent runs, connecting the platform to an AI pipeline that extracts security controls from framework documents and generates summaries; moved from a local Llama model to GPT-4.1 for better quality at acceptable cost.

Eurobank Direktna: IT Support | 12/2023 - 03/2025

- Day-to-day technical support for internal bank teams: software installation and troubleshooting of workstations, printers and banking systems.
- Handled support requests through Jira, diagnosing and resolving hardware, software and application issues for bank staff.
- Wrote SQL queries to pull data from internal databases for requesting teams.

Comtrade - EDIT: Internship | 07/2023

- Two-week team internship: designed and deployed a cloud-native app.

Selected Projects

- **Haiku Clock** (2026): e-ink clock (MicroPython, Raspberry Pi Pico) showing a haiku for the current time, with NTP sync and deep sleep between updates.
- **Music Recommendation System** (2025): song recommender (Python, scikit-learn) using KNN and cosine similarity over audio features.
- **Travel Agency** (2023): PHP/Laravel web application for searching vacation destinations, with reservations and email notifications.