Nebojsa Jovanovic

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Professional Summary

Mechanical Engineer and Software Developer with over 5 years of experience at Hatch developing technology solutions for industrial and energy systems. Combines strong analytical and engineering principles with modern software development skills across **C++**, **Python**, and cloud platforms. Experienced in designing control systems, automation tools, and intelligent data-driven applications for large-scale infrastructure projects.

Technical Skills

Engineering & Software: Systems design, automation, real-time data systems
Languages: C, C++, Python, Go, JavaScript, C#, Shell, SQL
Frameworks / Tools: Flask, Django, Aiohttp, Angular, PyTorch, CUDA
Tools & technologies: Linux, Docker, Podman, K8S, Nvim, Git, Azure DevOps
Databases: Postgresql, MongoDB, SQLite
Networking: HTTP, TCP/IP
Cloud: Azure ML, Azure DevOps
Core Competencies: Full-stack engineering, machine learning integration, control systems, edge devices

Professional Experience

Hatch Ltd. – *Mechanical Engineer / Software Developer*
Toronto, ON | Jan 2020 – Present

- Co-developed **VISTA**, a real-time hydro energy plant operating system written in **C++ and C#**, integrating control logic with industrial automation systems.
- Delivered a **computer vision solution** for **Onaping Depth Mine**, using **Python (Flask, PyTorch)** and **Angular** to enhance safety and operational efficiency.
- Designed and deployed an **edge computing system** for field-level monitoring and ML model execution.
- Collaborated with multidisciplinary teams to modernize legacy tools and automate data workflows.
- Applied **Azure ML** and **Azure DevOps** to streamline experimentation, deployment, and monitoring processes.
- Developed and tested personal software tools, including a **custom web framework** and **in-memory database** for R&D use.

Education

Bachelor of Applied Science in Mechanical Engineering
University of Toronto, Toronto, ON (2020)

Projects

Computer Vision Platform on Edge Device (Personal Project) - Fully on-prem scalable infrastructure for building computer vision applications using Yolo - Adding and managing RTSP cameras, enables querying data for building business logic derived applications. **Energy Plant Optimization Tool (Hatch)** – Implemented modules for data ingestion and performance analysis in C++.
Custom C++ Framework (Personal) – Built an HTTP server and lightweight DB engine to understand systems-level architecture.
Computer Vision Mining Project (Hatch) – Deployed camera-based inspection and analysis tools powered by Yolo.

Interests

Applied AI in industry, control systems, energy technologies, and embedded software.