Luka Ivanković

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About

I'm a creative, enthusiastic, and competitive engineer with over 2 years of experience in a fast-paced startup environment. With a strong foundation in machine learning and music tech, I bring technical versatility, and a drive to turn ideas into real world. *Learn fast hard things* – Cal Newport

Work Experience

TensorPix **may 2023 – may 2025**

- Engineered and integrated an audio denoising model into the platform's infrastructure, enabling users to clean audio channels in their videos directly on the site (**PyTorch**, **Django**, **FFmpeg**, **Triton**)
- Independently implemented offline test automation with **GitHub actions** and **Docker** that ensured each PR has no errors prior pushing, thus saving developers 5+ min per PR in all repositories
- Developed an online video compression tool using **WebAssembly** and **FFmpeg**, enabling users to reduce video file sizes by up to 80% directly in the browser (**Vue.js**)
- Created a custom synthetic dataset using **StyleGAN** for enhancing model training in low-data scenarios; improved model generalization and robustness
- Built a real-time video player with synchronized audio/video playback using **Vue.js** and **FFmpeg**, optimized for low-latency performance in the browser

Ericsson Nikola Tesla **oct 2022 – feb 2023**

- Radio software engineer - Java and C++

Education

The Faculty of Electrical Engineering and Computing **2019 – summer 2025**

- Bachelor's thesis - I developed a multiplayer combat game with a shape-drawing mechanic. **Resnet18** was trained to classify those shapes up to 99% accuracy
- Master's thesis - Emulation of Guitar Effects Using Machine Learning. Developed ML models including **LSTMs**, **WaveNet**, **TCN**, **SSMs** to emulate analog guitar effects. Created a custom dataset with over 5 hours of processed and clean guitar recordings. Achieved performance comparable to state-of-the-art approaches in audio effect modeling

Projects

- Lumen Data Science 2023 - **Vgg16**, **Resnet18** were trained to classify instruments in a song up to 90% accuracy using audio spectrograms. Performed full dataset analysis to identify optimal preprocessing and model configuration. (**PyTorch**)
- Trained a **CycleGAN** on 1193 Claude Monet paintings to perform unpaired style transfer between photos and impressionist artwork. Architecture included a **ResNet-based** generator and **PGGAN Discriminator**
- Developed a computer vision pipeline to estimate building height from single RGB images using **VGG16** and **ResNet50**; conducted dataset preprocessing and model tuning for improved prediction accuracy
- Won AI Battlegrounds Hackaton 2023. Participated in Algotrade Hackaton 2024.

Interests and additional information

I enjoy the challenge of learning new skills. I've been teaching myself **guitar** for the past 8 years and recently started learning **piano**. I believe both programming and playing instruments tackle the same creative part of the brain. I regularly train to keep my body and mind healthy. I'm a casual D&D and Catan player.