

Vladyslav Dykyi

AI Engineer | Computer Vision · Deep Learning · Edge AI

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Professional Summary

AI Engineer with 5 years of software development experience, specializing in deep learning, computer vision, and deploying AI systems in real-world environments. Hands-on experience developing and evaluating neural networks with PyTorch, implementing semantic segmentation and object detection models, and optimizing inference using ONNX Runtime and INT8/INT4 quantization.

Experienced in building AI-powered physical products, integrating machine learning models with embedded hardware, and developing real-time perception and speech-processing pipelines on resource-constrained devices. Strong Python engineering background spanning machine learning experimentation, model deployment, and production software development.

Particularly interested in embodied AI, humanoid robotics, and applying deep learning to perception, intelligent behavior, and human-robot interaction.

Technical Skills

Machine Learning & Deep Learning	PyTorch, Neural Networks, Model Training, Model Evaluation, Model Optimization, Quantization, ONNX Runtime, INT8/INT4
Computer Vision	Object Detection, Semantic Segmentation, U-Net, SegNet, DeepLabV3+, Image Processing, Deep Learning for Visual Perception
Edge AI & Embedded Systems	Raspberry Pi, Embedded Linux, Edge AI Deployment, Real-Time Inference, Wake-Word Detection, Voice Activity Detection, Speech Recognition, Hardware-Software Integration
Programming & Software Engineering	Python, C/C++, TypeScript, JavaScript, SQL, FastAPI, Flask, REST APIs, Asynchronous Programming
Generative AI & Multimodal Systems	LLMs, Speech-to-Text, Text-to-Speech, Multimodal AI Applications, AI Agents, LangChain, LangGraph, Tool Calling
Infrastructure & MLOps	Docker, Kubernetes, GitHub Actions, CI/CD, AWS, Azure, Model Deployment, Observability, Experiment Tracking

Professional Experience

February 2026 – Present	Production Engineer Ttractive Linz, Austria - Develop Python-based automation, internal Flask APIs, and diagnostic tools supporting reliable manufacturing operations and hardware production workflows. - Investigate production incidents and hardware-related failures, performing root-cause analysis and implementing improvements to system stability and reliability. - Analyze production data using MongoDB, Kibana, and Elasticsearch to identify anomalies, investigate failures, and support engineering decisions. - Collaborate with engineering and production teams to troubleshoot technical issues and improve automated testing and diagnostic workflows.
September 2024 – September 2025	AI Engineer LORAtch e.U. Linz, Austria - Designed and developed the AI software architecture for LORA Cube, an intelligent voice assistant integrating embedded hardware, on-device machine learning, and cloud-hosted AI models. - Implemented real-time speech-processing pipelines combining wake-word detection, voice activity detection, speech recognition, and AI-powered conversational interactions. - Optimized neural network inference using ONNX Runtime and INT8/INT4 quantization to support efficient execution of machine learning models on resource-constrained hardware. - Integrated AI software with Raspberry Pi-based hardware, including microphones, speakers, displays, and NFC components, enabling interactive communication between users and a physical device. - Developed asynchronous AI pipelines coordinating local inference, external AI services, and device interactions while accounting for latency, reliability, and resource limitations. - Designed and deployed a multi-provider AI architecture supporting Large Language Models, agent orchestration, tool calling, and multimodal interactions. - Containerized AI services with Docker and implemented CI/CD pipelines with GitHub Actions to support reliable development and deployment.
March 2024 – December 2025	AI Engineer Johannes Kepler University Linz Linz, Austria - Developed an AI platform providing students with access to multiple domain-specific AI assistants, including specialized applications for biology and other academic disciplines. - Contributed to the design and implementation of AI-powered applications using Python, machine learning techniques, and Large Language Models. - Integrated conversational AI capabilities with application services to provide interactive, context-aware assistance across different academic subjects.
2022 – 2024	Freelance Backend Developer Upwork Remote - Developed Python-based software solutions and backend services for international clients, implementing REST APIs, data-processing pipelines, and third-party integrations. - Built automation and data-processing applications using Python, FastAPI, Flask, MongoDB, and SQL databases. - Delivered software projects end-to-end, from requirements analysis and architecture through implementation, testing, deployment, and handover.
2021 – 2022	Python Developer National University “Odesa Law Academy” Odesa, Ukraine - Developed Python applications and automated data-processing workflows for university-related software projects. - Built an AI-powered travel assistant recommending restaurants and hotels based on user preferences. - Implemented web-scraping and data-processing pipelines for collecting, structuring, and validating application data.

Selected Projects

Field Area Segmentation — Computer Vision Research [Python](#) · [PyTorch](#) · [U-Net](#) · [SegNet](#) · [DeepLabV3+](#)

- Developed and evaluated deep learning architectures for agricultural field segmentation from satellite imagery as part of a Solafune computer vision competition.
- Experimented with U-Net, SegNet, and DeepLabV3+ architectures to compare approaches to semantic segmentation and field boundary identification.
- Applied computer vision and deep learning techniques to extract meaningful spatial information from complex visual data.

License Plate Detection — Computer Vision [Python](#) · [Deep Learning](#) · [Object Detection](#)

- Developed a custom computer vision model for detecting vehicle license plates in images.
- Achieved 96% recall in license plate detection, focusing on identifying relevant objects across different visual conditions.
- Applied model evaluation and optimization techniques to improve detection performance and reliability.

Education

BSc, Artificial Intelligence
Johannes Kepler University Linz

BSc, Economics
Odesa National Economic University

Languages

Ukrainian	Native
Russian	Fluent
English	C1
German	A2