

Francesco Marko Livaic

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SUMMARY

Software engineer spanning full-stack development and applied AI/ML. Co-Founder and CTO of a B2B SaaS (production TypeScript and Python) and Software Developer at Ericsson (Java test framework for 5G RAN nodes). I build and evaluate LLM, agentic and lidar segmentation systems, and my bachelor's thesis evaluates multi-agent LLM systems.

TECHNICAL SKILLS

Languages & Frontend: TypeScript, JavaScript, Python, Java, SQL, C/C++; React, Next.js, TailwindCSS

Backend & Data: Node.js, FastAPI, Flask, PostgreSQL, Supabase, Prisma, REST APIs

AI / ML: LLM integration (OpenAI/Anthropic/Gemini), agent evaluation; PyTorch, TensorFlow, scikit-learn; point clouds; NumPy

Cloud, DevOps & Testing: Docker, CI/CD (GitHub Actions, Jenkins, Gerrit), Git, Linux; Vercel, Cloudflare; Vitest, Playwright, pytest

EXPERIENCE

Vectra XR 2026 – Present

Co-Founder & CTO

Remote

- Co-founded a B2B SaaS and own the full stack, shipping features from one Next.js 14 + TypeScript codebase with Node.js and Python services; cut a core step by 85% (20s to under 3s) with a containerized microservice.
- Designed a multi-tenant PostgreSQL data layer (Supabase + Prisma) with Row-Level Security and a REST service layer, gated by a Gitflow CI/CD pipeline with Vitest + Playwright.

Ericsson Nikola Tesla

2025 – Present

Software Developer

Zagreb, Croatia

- Engineer scalable Java solutions for the MJE test framework, a codebase of roughly 4 million lines, that validates Ericsson's global 4G/5G RAN infrastructure across a large, multi-team R&D organization.
- Build and maintain automated verification of the network nodes, working through Jenkins and Gerrit in a CI/CD pipeline with code review across connected repositories.

BACHELOR'S THESIS

Asymmetric Society: Strategic Exploitation and Welfare Inequality in LLM 2026

Agent Populations

TVZ Zagreb, asymmetric-society.vercel.app, Mentor: prof. Aleksandar Stojanovic

- Designed and ran an original framework that scored 320 multi-agent LLM games across 3 frontier models (Claude, GPT, Gemini) and a local Llama model, with a novel KL-divergence deception metric, batch orchestration and parse-failure gates on a EUR 100 API budget.
- Pre-registered on OSF (osf.io/rnqgs); 173 tests that run without API calls.

PROJECTS

surrey | *Python, PyTorch, three.js* | github.com/markolivaic/surrey 2026

- Trained a PointNet++ style lidar segmentation model on DALES-2: 3 seeds, 0.93 point accuracy on held-out tiles.
- Unseen San Francisco: finds 0.97 of Golden Gate Park's vegetation, calls water ground (0.95 at Embarcadero).

kessler | *Python, SGP4, TypeScript, three.js* | github.com/markolivaic/kessler 2026

- Propagates 18,983 satellites over 24 h (164M state vectors, about 14 min), screening every pair within 25 km.

anneal | *Python, FastAPI, CHGNet, three.js* | github.com/markolivaic/anneal 2026

- Streams each CHGNet relaxation step to the browser as you edit a real crystal; refuses disordered structures.

EDUCATION

Johannes Kepler University Linz (JKU) Linz, Austria

Master of Science, Artificial Intelligence

2026 – 2028

Zagreb University of Applied Sciences (TVZ)

Zagreb, Croatia

Professional Bachelor of Computer Engineering (Software Engineering)

2023 – 2026

LANGUAGES, CERTIFICATIONS & AWARDS

Languages: Croatian (native), English (C1) **Awards:** 2nd place, Blueprint UI/UX Hackathon (Zagreb); CodeIT C Programming Competition

Certifications: ML and Deep Learning Specializations (Stanford / DeepLearning.AI), CS50 AI (Harvard), NVIDIA DLI Edge AI