

Orestis Zambounis

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[GitHub](#) [LinkedIn](#)

Deep Learning, Computer Vision,
Robotics, Software Engineering

Experience

2023 - Present (1 yr 6 mos) · Senior Machine Learning Engineer · (QSC, acq. by Acuity Brands) · Zurich, CH · Remote

- Ported vision ML models to ONNX and TensorRT, **tripling** speed and reducing VRAM usage by **15%**.
- Increased system speed by **30%** on resource-constrained hardware through batched inference implementation.
- Led CV/ML prototyping in detection, tracking, embeddings, and VLMs with state-of-the-art methods.
- Redesigned ML architecture for modularity and flexibility, and led efforts to clean up technical debt.
- Co-managed and mentored the ML team, integrated teams, enforced best practices, and led the hiring process.
- Technologies: **Python, PyTorch, TensorRT, ONNX, Weights & Biases, Grafana, ROS, Docker, GCP.**

2021 - 2023 (2 yrs) · Machine Learning Engineer · Seervision (ETHZ Spin-off, acq. by QSC) · Zurich, CH · Remote

- Optimized real-time detection pipeline, reduced latency by **24%**, VRAM by **45%**, and increased accuracy by **10%**.
- Designed, prototyped, tuned, and deployed a face recognition system with a false-positive rate below **5%**.
- Drove real-time inference optimization efforts, **tripling** the number of supported clients per hardware unit.
- Collaborated with the product team to prototype and experiment with CV/ML systems for novel user experiences.
- Technologies: **Python, C++, PyTorch, TensorFlow, OpenCV, CUDA, ROS, Docker, GitLab CI/CD, GCP.**

2020 - 2021 (6 mos) · MLOps Engineer · benshi.ai (funded by BMGF) · Barcelona, ES · Hybrid

- Built and maintained scalable data pipelines for ML models in production, from data ingestion to deployment.
- Technologies: **Python, Pandas, PySpark, Databricks, MLflow, Docker, Kubernetes, Azure, GitHub Actions.**

2019 - 2020 (1 yr 3 mos) · Full-Stack & Machine Learning Engineer · Freelancer · Remote

- Developed a CNN-based face predictor with an **18%** accuracy improvement, optimized for low-latency inference.
- Developed full-stack application with cross-platform frontend and microservice-based cloud architecture.
- Technologies: **Python, TensorFlow, scikit-learn, Flask, React, PostgreSQL, AWS.**

2016 - 2017 (1 yr) · Control Systems Engineer, Intern · Rapyuta Robotics (ETHZ Spin-off) · Tokyo, JP · On-site

- Achieved a **55x speedup** of NumPy-heavy simulation iterations and open-sourced the Python package [PyJet](#).
- Designed energy estimators using a Kalman Filter, enhanced tracking controller and performed sensor tests.
- Technologies: **Python, C++, NumPy, SciPy, ROS.**

Education

2017 - 2019 (2 yrs) · MSc Robotics, Systems & Control · 5.25/6.0 · ETH · Zurich, CH

- Developed an online deep learning architecture for object instance prediction, pose estimation, and tracking.
- Showed that an additional depth input channel improved the segmentation accuracy of Mask R-CNN by **31%**.
- Technologies: **Python, CUDA C/C++, TensorFlow, Keras, Caffe2, OpenCV.**

2012 - 2016 (3 yrs 6 mos) · BSc Mechanical Engineering · 5.51/6.0 · ETH · Zurich, CH

- Developed balancing algorithms for a 6DoF [omnicopter](#) using non-linear control methods.
- Technologies: **C++, MATLAB, Simulink.**

Projects

2023 - Present · [Beachin' Rentals](#) Self-service kiosk built using **Flask, Stripe, Shopify, RasPi, RS-485.**

2023 - 2024 · [Trap the Cat](#) Mobile app built with **JavaScript, CapacitorJS** and **Firebase**, with **100k+** downloads.

2022 · [Anti CryptoPunks](#) NFT project built on the **Polygon** blockchain, with **6 ETH** traded.

2015 · [PyJet](#) Python library converting **Python/NumPy** operations to **C++**, achieving a **55x** speedup.