Orestis Zambounis

me@orestisz.com

github.com/orestis-z, linkedin.com/in/orestis-z
Deep Learning, Computer Vision, Robotics,
Systems & Control, Distributed Systems

Experience

Senior Machine Learning Engineer *Aug 2021 - Present*

Seervision (ETH Zurich Spin-off) · Zurich, Switzerland

- Optimized person detection and pose estimation pipeline by **3x**, improved accuracy by **10%**, and reduced GPU memory usage by **45%**
- Built a face recognition system from scratch with a false-positive rate below **5%**
- **Tripled** the number of supported systems per hardware unit as technical lead
- Received recognition for achieving the highest business impact among all engineers in 2022

Machine Learning Engineer *Nov 2020 - June 2021*

benshi.ai (Funded by Bill & Melinda Gates Foundation) · Barcelona, Spain

- Led creation of data processing tooling with **Databricks**, **Python**, **Spark**, and CI/CD pipelines, securing **$X million** in funding with mentored engineer
- Managed ML models' lifecycle, building data pipelines, A/B testing, mock data generation, and RL simulation using **Pandas**, **MLflow**, **Azure**, **Docker**, **Kubernetes**, **Vue.js**, ETL, and statistical modeling

Full-Stack Engineer *Feb 2019 - May 2020*

Self-employed · Global (Digital Nomad)

- Developed and marketed an end-to-end cloud-based AI-powered app, using **TensorFlow** and **scikit-learn** to modify and retrain a CNN on a face dataset resulting in an **18%** improvement in accuracy, and productionized the model for real-time inference
- Designed cross-platform frontend using **Cordova**, **React Native**, **React.js**, and **Electron**, and deployed scalable microservices to **AWS** with **Python**/**Flask**, **PostgreSQL**, and proxies

Control Systems Engineer, Intern *Mar 2016 - Feb 2017*

Rapyuta Robotics (ETH Zurich Spin-off) · Tokyo, Japan

- Achieved a **55x** speedup of **NumPy**-heavy simulation iterations and open-sourced the **Python** package PyJet
- Designed energy estimators for a multicopter using a Kalman Filter (EKF), **Python**, **SciPy**, and **C++**
- Improved a setpoint tracking controller and conducted sensor tests for a multicopter using **C++** and **Python**

Education

Imperial College London *Aug 2018 - Mar 2019*

Master's Thesis · London, United Kingdom

- Pioneered a multi-task CNN deep learning architecture that predicts object instances, human poses, instance masks, and tracks people end-to-end.
- Implemented CNN using **Caffe2** and **Python** including custom operators with **CUDA C/C++**

ETH Zurich *Feb 2017 - Mar 2019*

MSc Robotics, Systems & Control · Zurich, Switzerland

- Introduced a method to boost scene understanding for robotic systems equipped with RGB-D sensors
- Showed that an additional depth input channel improves the segmentation accuracy of Mask R-CNN by **31%**
- Submitted paper to CoRL 2018 and leveraged knowledge in **TensorFlow**, **Keras**, **OpenCV** and **Python**

ETH Zurich *Sep 2012 - Feb 2016*

BSc Mechanical Engineering · Zurich, Switzerland

- Graduated with more than two standard deviations above the average (top **5%**)
- Implemented balancing manoeuvres for the Omnicopter to demonstrate its 6DoF flying versatility
- Derived system dynamics, synthesised non-linear attitude control algorithms, and a Kalman filter using quaternions, **C++** and **MATLAB** / **Simulink**