Orestis Zambounis

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C++, Python, Machine Learning, Robotics,
Computer Vision, Cloud Infrastructure

Experience

Machine Learning Infrastructure Engineer *Nov 2020 - Present*

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

- Lead the creation of the data processing infrastructure with **Databricks**, **Python**, **Spark** and CI/CD pipelines
- Switched my role, onboarded and lead a new engineer to hit a crucial milestone that secured **$X million** in funding
- Managed the lifecycle of machine learning models using **MLflow** and contributed to the experimental testing platform
- Gained experience in conducting interviews, **Pandas**, **Azure**, **Docker**, **Kubernetes**, **Vue.js**, ETL and statistical modeling

Full-Stack / ML Engineer, Digital Marketer *Jun 2019 - May 2020*

Self-employed · Basel, Switzerland / Global

- Modified and retrained a CNN with **TensorFlow** and **scikit-learn** on a dataset of faces improving the state-of-the-art accuracy by **18%** and productionised the model for real-time inference
- Developed a cross-platform frontend using **Cordova**, **React Native**, **React.js** and **Electron**, and deployed a scalable microservice architecture to **AWS** based on **Python** / **Flask**, **PostgreSQL** and proxy services
- Generated leads by blogging, facebook & google ads, SEO and email campaigns, and leveraged knowledge in branding, marketing funnels, subscription-based pricing and data-driven optimisations

Co-Founder, Product Manager & Tech Lead *Jan 2018 - Apr 2019*

Kimata Networks · Full-time · Basel, Switzerland

- Analysed the competitive landscape, created specifications and roadmaps for a digital product, iterated on user feedback, hired and managed an agile team of five frontend and backend developers
- Passed the first Venture Kick stage raising CHF 10k, gained entrepreneurial insights into company founding, business planning, pivoting, intellectual property, outsourcing, accounting and strategic decision-making
- Lead the development of a mobile app with **OpenGL** / **libGDX**, **Java** / **Android** and **React Native**

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

Rapyuta Robotics (ETH Zurich Spin-off) · Full-time · Tokyo, Japan / Zurich, Switzerland

- Achieved a **55x** speedup of **NumPy**-heavy model simulation iterations, and open-sourced the **Python** package PyJet
- Designed energy estimators for a multicopter with Kalman Filters (EKF) using **Python**, **SciPy** and **C++**
- Improved a setpoint tracking controller and conducted sensor tests for a multicopter using **C++** and **Python**
- Leveraged additional knowledge in program optimisation, **ROS**, **Linux**, **Bash** scripting, **Git** and authentication servers

Education

Imperial College London *Aug 2018 - Jun 2019*

Master's Thesis · London, United Kingdom

- Laid a solid step stone for generating arbitrarily large 3D human pose datasets for human motion prediction
- Pioneered a multi-task CNN deep learning architecture that predicts object instances, human poses, instance masks and tracks people end-to-end
- Implemented the CNN using **Caffe2** and **Python** including custom operators with **CUDA C/C++**

ETH Zurich *Feb 2017 - Jun 2019*

MSc Robotics, Systems & Control (5.25/6.0) · Zurich, Switzerland

Semester thesis (5.75/6.0):

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

ETH Zurich *Sep 2012 - Feb 2016*

BSc Mechanical Engineering (5.51/6.0) · Zurich, Switzerland

- Graduated with more than two standard deviations above the average (top **5%**)

Bachelor's thesis (5.75/6.0):

- Implemented balancing manoeuvres for the Omnicopter to demonstrate its six degrees of freedom flying versatility
- Synthesised non-linear attitude control algorithms and a Kalman filter using **C++** and **MATLAB** / **Simulink**