

# Orestis Zambounis

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[github.com/orestis-z](https://github.com/orestis-z)

C++, Python, Machine Learning,  
Computer Vision, Data Engineering,  
Cloud Infrastructure

## Experience

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### Machine Learning Engineer

Nov 2020 - Present

benshi.ai · Full-time · Barcelona, Catalonia

- Lead the creation of the data processing infrastructure using **Databricks**, **PySpark** and CI/CD pipelines
- Leveraged additional knowledge in **MLflow**, **Azure**, **Docker** and **Kubernetes**

### Full-Stack Engineer w/ Machine Learning

Jul 2019 - May 2020

LeanMind · Self-employed · Basel, Switzerland / Global

- Modified and retrained a CNN with **TensorFlow** and **scikit-learn** on a dataset of faces leading to an **18%** higher prediction accuracy compared to the state-of-the-art
- Developed a frontend using **Cordova**, **React Native**, **React.js** and **Electron** to support mobile, web and desktop apps with one code-base
- Developed a backend composed of four scalable microservices with **Python / Flask** and **PostgreSQL**, and deployed it to **AWS** OpsWorks

### Co-Founder, Technical Lead

Jan 2018 - Apr 2019

Kimata Networks · Full-time · Basel, Switzerland

- Launched a mobile app with **OpenGL / libGDX**, **Java / Android** and **React Native**
- Created product specifications, hired and managed a team of five frontend and backend developers
- Passed the first Venture Kick stage raising CHF 10k, gained entrepreneurial insights into company founding, business planning, intellectual property, accounting and strategic decision-making

### Mobile App Developer (side job)

Sep 2017 - Aug 2018

nextron internet team · Part-time · Basel, Switzerland

- Developed and released a cross-platform mobile app with **React Native** leading to 2,000+ downloads and 5-star rating

### System Control Engineer, Intern

Mar 2016 - Feb 2017

Rapyuta Robotics · Full-time · Zurich, Switzerland / Tokyo, Japan

- Sped up a **Python / NumPy** model-simulation-framework by **550%** with the creation of [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 **ROS**, **Linux**, **Bash** scripting, **Git** and authentication servers

## Education

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### Imperial College London

Aug 2018 - Jun 2019

Master's Thesis Exchange · 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 the CNN using **Caffe2** and **Python** including custom operators with **CUDA C/C++**

**ETH Zurich***Feb 2017 - Jun 2019*

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

Semester thesis (5.75/6.0):

- Showed that an additional depth input channel improves the instance segmentation accuracy of Mask R-CNN by up to **31%**
- Submitted the 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

Bachelor's thesis (5.75/6.0):

- Synthesised non-linear attitude control algorithms and a Kalman filter using **C++** and **MATLAB** / **Simulink**

## Software Projects

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**PyJET – compiling NumPy**

- Achieved an up to **55x** speedup of **Python** code by converting **NumPy** operations to performant **C++**
- Co-authored and open-sourced the Python package [PyJET](#)

**Mobile Apps**

- Created multiple mini mobile apps with **React Native** and **Cordova** published them on the [Google Play Store](#)

**Resume Compiler**

- Open-sourced a resume compiler using **Node.js** at [github.com/orestis-z/resume-compiler](https://github.com/orestis-z/resume-compiler)

## Other

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**Languages**

German (mother tongue), Greek (mother tongue), English (fluent), French (intermediate), Spanish (beginner), Italian (beginner)

**Hobbies**

Rock climbing, Saxophone, Programming, Traveling