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github.com/orestis-z

Orestis Zambounis
MSc ETH Robotics Engineer

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Experience

Web Application Developer (civil service) — May 2020 - Jul 2020
Kantonsspital St Gallen · Full-time — St. Gallen, Switzerland
- Added new features to a frontend website with **Vue.js** following integration testing with **TestCafe**

Full-Stack Developer w/ Machine Learning — Jul 2019 - May 2020
Zambounis Technology · Full-time — Basel, Switzerland
- Modified and retrained a CNN with **TensorFlow** and **scikit-learn** for facial beauty detection leading to an up to **18%** higher accuracy compared to the state-of-the-art
- Developed a cross-platform frontend with a mixture of **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
- Generated user leads with blogging, Facebook and Google Ads

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
- Gained entrepreneurial insights into founding a company, business planning, intellectual property, basic accounting, strategic decision making and pivoting
- Raised CHF 10,000 by passing the first Venture Kick stage

Mobile App Developer — Sep 2017 - Aug 2018
nextron internet team GmbH · Part-time — Basel, Switzerland
- Developed and released a cross-platform mobile app with **React Native** leading to 1,000+ downloads and 5 star rating

System Control Engineer, Intern — Mar 2016 - Feb 2017
Rapyuta Robotics · Full-time — Zurich, Switzerland / Tokyo, Japan
- Designed a state-of-charge battery estimator with an extended Kalman Filter (EKF)
- Refactored a model-simulation-framework codebase in **Python** / **NumPy**
- Sped up a model-simulation-framework by **550%** with the creation of PyJet
- Created an energy estimator for an arbitrary path followed by a multi-rotor vehicle
- Improved a setpoint tracking controller for a multi-rotor vehicle implemented in **C++**
- Leveraged additional knowledge in **Linux**, **Bash** scripting and **ROS**

Education

Imperial College London — Aug 2018 - Mar 2019
Exchange for Master's Thesis — London, United Kingdom
- Designed a CNN deep learning architecture that predicts object instances, human poses, instance masks and tracks people
- Implemented the CNN using **Caffe2** and **Python** including custom operators with **CUDA C/C++**

ETH Zurich — Feb 2017 - Mar 2019
MSc Robotics, Systems & Control (5.25/6.0) — Zurich, Switzerland
Semester thesis (5.75/6.0):
- Modified an existing Mask R-CNN implementation with **TensorFlow**, **Keras** and **Python**
- Showed that an additional depth input channel improves the segmentation accuracy by up to **31%**
- Submitted the computer vision paper report to CoRL 2018

ETH Zurich
BSc Mechanical Engineering (5.51/6.0)

<div style="text-align:right">Sep 2012 - Feb 2016
Zurich, Switzerland</div>

Bachelor's thesis (5.75/6.0):
- Synthesised non-linear attitude control algorithms and a Kalman filter using **C++** and **MATLAB / Simulink**

Software Projects

Personal Website
- Published my personal website with **React.js / Next.js** and **AWS** Lambda on www.leanmind.ch (German)

Resume Compiler
- Open-sourced a resume compiler using **Node.js** at github.com/orestis-z/resume-compiler

Mobile Apps
- Created multiple mini mobile apps with **React Native** and **Cordova** published on Google Play Store

PyJET – compiling NumPy
- Sped up **Python** code by converting **NumPy** operations to performant **C++**
- Co-authored and open-sourced the Python package PyJET

Other

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

Hobbies
Rock climbing, Saxophone, Programming, Traveling