CH-4103 Bottmingen 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 $\textsc{GmbH} \cdot \textsc{Part-time} \cdot \textsc{Basel}, \textsc{Switzerland}$

• 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) using **Python** and **C++**
- Sped up a **Python / NumPy** model-simulation-framework by **550%** with the creation of <u>PyJet</u>
- Created an energy estimator for an arbitrary path followed by a multi-rotor vehicle with Python / SciPy
- 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 $(5.25/6.0) \cdot$ 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 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

Personal Website

• Published my personal website with **React.js** / **Next.js** and **AWS** Lambda on <u>www.leanmind.ch</u> (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