

E-mail

fayezlahoud@gmail.com

Personal Website

fayez.me

EDUCATION	École Polytechnique Fédérale de Lausanne	2015 - 2017
	M.S., Computer Science	
	American University of Beirut	2009 - 2013
	B.E., Computer and Communication Engineering Minor in Mathematics	
PROFESSIONAL EXPERIENCE	Pix4D SA - Senior Data Scientist	2019 - Present
	<ul style="list-style-type: none"> • R&D of 2D/3D computer vision and deep learning algorithms • Management of multiple research projects with a team of 7 people • Maintenance of infrastructure and product analytics tools 	
	<i>Technologies:</i> C/C++, Conan, CMake, Pybind, Python, PyTorch, Concourse	
	Sony Europe - Research Intern	2017
	<ul style="list-style-type: none"> • Audio speech recognition using convolutional networks • Visualizations for Sony's DNN Library • Distributed resource management using Grid Engine 	
	<i>Technologies:</i> C/C++, Cython, Python, NNabla, Kaldi, Open Grid Engine	
	Vidinoti SA - Software Developer	2016
	<ul style="list-style-type: none"> • Image recognition and tracking using AGAST detectors and BRIEF descriptors • NPM module development for automating descriptors calculation • Mobile JavaScript library development for Augmented Reality applications 	
	<i>Technologies:</i> JavaScript, RequireJS, NPM, Gulp, Python, Image processing	
	Murex Systems - Software Developer	2012 - 2015
RESEARCH EXPERIENCE	<ul style="list-style-type: none"> • Java Swing manipulation API for test developers • Web templates for test reports and automated tools • Java-JavaScript bindings API in JavaFx Webview 	
	<i>Technologies:</i> JavaFx, Groovy, Maven, JavaScript, AngularJS, Ruby, Rails	
	École Polytechnique Fédérale de Lausanne - Doctoral Assistant	2018 - 2019
	<ul style="list-style-type: none"> • Multi-Spectral image enhancement and super resolution • Binary neural network optimization • Zero-Learning multi-modal image fusion 	
	<i>Technologies:</i> Python, PyTorch, MATLAB, C/C++, Image processing, Neural networks	
	École Polytechnique Fédérale de Lausanne - Semester Projects	2016 - 2018
	<ul style="list-style-type: none"> • Keyword-based automatic local and global image enhancement 	

- Virtual and augmented reality for firefighter applications
- Object detection and classification for digitizing archived paintings

Technologies: Python, Anaconda, OpenCV, Tesseract, Unity3D, Image processing

American University of Beirut - Final Year Project

2012 - 2013

- Genetic algorithm for daily rides scheduling
- Android application for requesting rides and viewing routes

Technologies: Java, Android, Google Maps API, Genetic Algorithms

PUBLICATIONS F. Lahoud, S. Süssstrunk, "Zero-Learning Fast Medical Image Fusion," in IEEE International Conference on Information Fusion (FUSION), 2019.

F. Lahoud, R. Zhou, M. El Helou, and S. Süssstrunk, "Super resolution: wavelets and residual learning," in IS&T EI Proceedings (EI), 2019.

F. Lahoud, S. Süssstrunk, "AR in VR: Simulating augmented reality glasses for image fusion," in IS&T EI Proceedings (EI), 2019.

F. Lahoud, R. Zhou, and S. Süssstrunk, "Multi-Modal Spectral Image Super-Resolution," in Proceedings of the European Conference on Computer Vision (ECCV) Workshops, 2018.

F. Lahoud, and S. Süssstrunk, AR in VR: simulating infrared augmented vision, in IEEE International Conference on Image Processing (ICIP), 2018.

F. Lahoud, M. S. Ortiz Segovia, B. Jin, and S. Süssstrunk, Keyword-Based image color re-rendering with semantic segmentation, in IEEE International Conference on Image Processing (ICIP), 2017.

C. M. Boukhater, O. Dakroub, F. Lahoud, M. Awad, and H. Artail, An intelligent and fair GA carpooling scheduler as a social solution for greener transportation, in 17th IEEE Mediterranean Electrotechnical Conference (MELECON), 2014.

O. Dakroub, C. M. Boukhater, F. Lahoud, M. Awad, and H. Artail, An intelligent carpooling app for a green social solution to traffic and parking congestions, in 16th IEEE International Conference on Intelligent Transportation Systems (ITSC), 2013.

AWARDS

Winner, PIRM 2018 Challenge on Example-Based Spectral Image Super-Resolution (Both tracks), ECCV 2018 Workshops.

Honorable Mention Award, NTIRE 2018 Challenge on Spectral Reconstruction from RGB Images, CVPR 2018 Workshops.

Best Poster Award, FEA student and alumni conference, American University of Beirut.

7 x Dean's Honor List, American University of Beirut.

LANGUAGES

English - French: Fluent

Arabic: Mother-tongue

Spanish: Self-taught (C1 Level)

Mandarin Chinese: Self-taught (HSK3 Level)