



Alireza Ghasemi

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Born 18 April 1987, Iranian citizen, Swiss B permit holder.

Education

École Polytechnique Fédérale de Lausanne
PhD, Computer and Communication Sciences

Lausanne, Switzerland
September 2011 – Present

Sharif University of Technology
M.Sc., Artificial Intelligence

Tehran, Iran
September 2009 – August 2011

Sharif University of Technology
B.Sc., Software Engineering

Tehran, Iran
September 2005 – September 2009

Selected Professional Experience

École Polytechnique Fédérale de Lausanne
Doctoral Researcher - R&D Engineer

Lausanne, Switzerland
September 2011 – Present

In charge for cutting-edge research in the areas of image retrieval, multi-camera systems, video analysis and image-based localization. I develop mainly in MATLAB, Java, JavaScript and Python.

- Developed a patent and a track record of publications in light-field image retrieval and video analysis.
- Participating as an R&D engineer in the development of an outdoor urban localization system.
- Developed a novel online game (using Play! and RESTful services) to exploit human computation paradigms in sentiment analysis.

Swiss Center for Electronics and Microtechnology (CSEM)
R&D Intern

Neuchâtel, Switzerland
October 2015 – March 2016

In charge of developing novel cutting-edge solutions for hyper-spectral imaging.

DSP Lab - Sharif University of Technology
Research Assistant

Tehran, Iran
March 2010 – August 2011

In charge for development of an innovative image retrieval algorithm incorporating machine learning and user feedback.

- Developed a robust classification framework appropriate for massive, mostly unlabeled data.

Intelligent Information Systems (IIS) Laboratory
Web Developer

Tehran, Iran
October 2009 – March 2010

Skills

Java Development: Expert. In-depth knowledge of JavaSE, JavaFX, Swing, JDBC, Weka, etc. Working knowledge in Android development

JavaScript: Experienced in Node.js, Chrome extensions, frameworks, client-side scripting, etc.

C: Experiences with OpenCV and Win32 API.

MATLAB: Proficient in Signal and Image Processing, Computer Vision and Pattern Recognition toolboxes.

Web Development: Experiences in REST, Symfony, Spring MVC, Play!, GWT, Grails, etc.

Typesetting: Fluent in L^AT_EX.

Python: Experiences in Blender scripting, NumPy and SciPy. **Database Design:** Experiences in SQL, ERD, NoSQL (MongoDB, Firebase).

Languages

Persian: Native

English: Full professional proficiency

Used extensively in study and work. C1 level.

French: Limited working proficiency

Learning since 2012. Currently in B1 level.

German: Limited working proficiency

Learning since 2013. Currently in A2 level.

Selected Publications and Patents

Method and Apparatus for Identifying Local Features: *Alireza Ghasemi*; Laurent Rime; Martin Vetterli, Swiss Patent No. 2013CH-1102, Filed June 2013.

SHAPE: Linear-Time Camera Pose Estimation With Quadratic Error-Decay: *Alireza Ghasemi*; Adam Scholefield and Martin Vetterli, IEEE ICASSP 2016. Shanghai, China

On the Accuracy of Point Localisation in a Circular Camera Array: *Alireza Ghasemi*; Adam Scholefield and Martin Vetterli, IEEE International Conference on Image Processing (ICIP), 2015. (*Chosen in the top 10% papers*)

A Bayesian Approach to the Data Description Problem: *Alireza Ghasemi et. al.*, AAAI Twenty-Sixth Conference on Artificial Intelligence (AAAI-12), 2012

Selected Honors and Awards

EPFL Bonus for Exceptional Performance

Granted a bonus increase in salary due to exceptional scientific performance at EPFL.

Lausanne, Switzerland

Fall 2015

IEEE Signal Processing Society Travel Grant

Granted the IEEE SPS Travel Grant to attend the conference ICIP 2015.

Lausanne, Switzerland

Spring 2015

Qualcomm Innovation Fellowship 2015

Winner of the prestigious Qualcomm Innovation Fellowship (QInF'15).

Lausanne, Switzerland

Spring 2015

Doctoral Fellowship from the I&C School of EPFL

Granted full one-year fellowship to start PhD.

Lausanne, Switzerland

Fall 2011

Rank 1st in the Artificial Intelligence section of the Sharif University

Ranked by GPA.

Tehran, Iran

Summer 2011

Rank 1st in the nationwide graduate entrance exam in IT engineering

Among more than 13,000 students.

Tehran, Iran

Summer 2009

Interests

Reading: Literature, History, Technology. Gaining general knowledge through studying novel topics.

References

Available upon request