



# Alireza Ghasemi

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Born 1987, Iranian citizen, Swiss B permit holder.

## Education

**École Polytechnique Fédérale de Lausanne**

*PhD, Computer and Communication Sciences*

**Lausanne, Switzerland**

*September 2011 – December 2016*

**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

**ELCA Informatique SA**

*Software Engineer and Data Scientist*

**Lausanne, Switzerland**

*January 2017 – Present*

**École Polytechnique Fédérale de Lausanne**

*Doctoral Researcher - R&D Engineer*

**Lausanne, Switzerland**

*September 2011 – December 2016*

In charge for cutting-edge research in the areas of image retrieval, multi-camera systems, video analysis and image-based localization. I developed 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

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

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

**C:** Experiences with OpenCV and Win32 API.

**Python:** Experiences in Blender scripting, NumPy and SciPy.

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

**Typesetting:** Fluent in  $\text{\LaTeX}$ .

**Database Design:** Experiences in SQL, ERD, NoSQL (MongoDB, Firebase).

## Languages

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**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

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**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

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**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

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

## References

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Available upon request

## Publications

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John Doe. Title, year.

John Doe. Title, year.

John Doe and Author 1. *Title*. Publisher, edition edition, year.

John Doe and Author 2. *Title*. Publisher, edition edition, year.

John Doe and Author 3. Title, year.