Alireza Ghasemi

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Born 1987, Iranian citizen, Swiss B permit holder.

Education

École Polytechnique Fédérale de Lausanne   **Lausanne, Switzerland**
PhD, Computer and Communication Sciences   *September 2011 – December 2016*

Sharif University of Technology   **Tehran, Iran**
M.Sc., Artificial Intelligence   *September 2009 – August 2011*

Sharif University of Technology   **Tehran, Iran**
B.Sc., Software Engineering   *September 2005 – September 2009*

Selected Professional Experience

ELCA Informatik AG   **Zürich, Switzerland**
Senior Engineer/Data Scientist   *September 2018 – Present*
Moved to our Zurich offices, starting a new series of adventures in Data analysis and engineering.

ELCA Informatique SA   **Lausanne, Switzerland**
Software Engineer and Data Scientist   *January 2017 – August 2018*
Projects spanning a variety of sectors aiming to collect, organise, efficiently retrieve, gain insight from, and make sense of data in different volumes and a variety of modalities, including audio, visual, and text information.

École Polytechnique Fédérale de Lausanne   **Lausanne, Switzerland**
Doctoral Researcher - R&D Engineer   *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)   **Neuchâtel, Switzerland**
R&D Intern   *October 2015 – March 2016*
In charge of developing novel cutting-edge solutions for hyper-spectral imaging.

Skills

Java Development: Expert. In-depth knowledge of JavaSE, JavaFX, Swing, JDBC, Spark, DL4J, etc. Working knowledge in Android development

Python: Proficient in Machine Learning, Artificial Intelligence, Natural Language Processing, and Scientific Computing packages.

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

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

C: Experiences with OpenCV and Win32 API.

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

Typesetting: Fluent in LaTeX.

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

Languages

Persian: Native

French: B1. Limited working proficiency

English: C1. Full professional proficiency

German: A2. Actively learning. Limited working proficiency

Selected Publications and Patents

Method and Apparatus for Identifying Local Features: *Alireza Ghasemi*; Laurent Rime; Martin Vetterli, US Patent 9,613,256, Granted Apr. 2017.

Point and Sensor Estimation from Images: Martin Vetterli; *Alireza Ghasemi*; Adam Scholefield, US Patent Application 15/275,973, Filed Sep. 2016.

Bound and Conquer: Improving Triangulation by Enforcing Consistency: Adam Scholefield; *Alireza Ghasemi* and Martin Vetterli, IEEE Transactions on Pattern Analysis and Machine Intelligence. Early access Sep. 2019

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 — **Lausanne, Switzerland**
Granted a bonus increase in salary due to exceptional scientific performance at EPFL. — *Fall 2015*

IEEE Signal Processing Society Travel Grant — **Lausanne, Switzerland**
Granted the IEEE SPS Travel Grant to attend the conference ICIP 2015. — *Spring 2015*

Qualcomm Innovation Fellowship 2015 — **Lausanne, Switzerland**
Winner of the prestigious Qualcomm Innovation Fellowship (QInF'15). — *Spring 2015*

Doctoral Fellowship from the I&C School of EPFL — **Lausanne, Switzerland**
Granted full one-year fellowship to start PhD. — *Fall 2011*

Rank 1st in the Artificial Intelligence section of the Sharif University — **Tehran, Iran**
Ranked by GPA. — *Summer 2011*

Rank 1st in the nationwide graduate entrance exam in IT engineering — **Tehran, Iran**
Among more than 13,000 students. — *Summer 2009*

Interests

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

References

Available upon request