



Alireza Ghasemi

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Education

École Polytechnique Fédérale de Lausanne

PhD, Computer, Communication and Information Sciences

Supervised by Professor Martin Vetterli and Dr. Adam James Scholefield.

Lausanne, Switzerland

2011–Present

Sharif University of Technology

M.Sc., Artificial Intelligence

Tehran, Iran

2009–2011

Sharif University of Technology

B.Sc., Software Engineering

Tehran, Iran

2005–2009

Selected Professional Experience

École Polytechnique Fédérale de Lausanne

Doctoral Researcher - R&D Engineer

Lausanne, Switzerland

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

DSP Lab - Sharif University of Technology

Research Assistant

Tehran, Iran

2010–2011

In charge for development of innovative image retrieval algorithm incorporating machine learning and relevance feedback. I used MATLAB and Java to develop the system.

- Developed a novel robust one-class classification framework and added active and semi-supervised learning capability to the well-known Support Vector Data Description (SVDD) model.

Intelligent Information Systems (IIS) Laboratory

Web Developer

Tehran, Iran

2009–2010

Database and web developer (PHP/Java) for a national-level enterprise project management system.

Peykasa Messageware Group

Backend Service Developer

Tehran, Iran

May 2009– October 2009

Backend developer in an integrated messaging platform. I developed in JavaEE, GWT and AJAX.

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/C++: Experiences with OpenCV and STL.

Python: Experiences in Blender scripting, NumPy and SciPy.

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

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

Typesetting: Fluent in L^AT_EX.

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.

Arabic: Elementary proficiency

Learned basics in high school.

Selected Publications

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

Scale-Invariant Representation of Light Field Images for Object Recognition and Tracking, Alireza Ghasemi and Martin Vetterli, IS&T/SPIE Electronic Imaging 2014, San Francisco. USA.

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

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

Rank 183rd (top %0.06) in the nationwide university entrance exam

Tehran, Iran

Among more than 300,000 students in the Mathematics branch.

Summer 2005

Interests

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

References

Available upon request