Pooyan Behnamghader

PhD Student
Department of Computer Science
University of Southern California

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Research Interests

Software Architecture Recovery, Software Repository Mining
Distributed Systems, Cloud Computing

Education

University of Southern California, Los Angeles, California USA
Ph.D. Student, Computer Science, August 2013 (expected graduation date: May 2018)
- Research Topic: "Cloud-Based Software Architecture Analysis"
- Advisor: Nenad Medvidovic

University of Tehran, Tehran, Iran
B.S., Computer Engineering, May, 2013
- GPA: 18.42 (of 20) Ranked 1st
- Advisor: Fatemeh Ghassemi

Honors and Awards

Provosts PhD Fellowship for four years from the University of Southern California **2013**
Also offered fellowships and/or research assistantships from U Illinois, UT Austin, Georgia Tech, UC San Diego, U Toronto, and EPFL

Recipient of the **Faculty of Engineering (FOE)** award from the University of Tehran **2012**
Ranked 1st student among all Computer Engineering students

Recipient of the **EPFL** competitive undergraduate summer internship scholarship **2012**

Ranked 3rd in the 16th Iran National **University Students Olympiad** in Computer Eng. **2011**

11th Place in the 12th Regional Contest of **ACM ICPC** in Asia region **2010**
Member of University of Tehrans ACM ICPC team in 2009 and 2010

Journal Publications

Pooyan Behnamghader, Duc Le, Joshua Garcia, Daniel Link, Arman Shahbazian and Nenad Medvidovic. A Large-Scale Study of Architectural Evolution in Open-Source Software Systems. Journal of Empirical Software Engineering. In Press.

Conference Publications

Sonal Mahajan, Bailan Li, **Pooyan Behnamghader**, William G. J. Halfond. Using Visual Symptoms for Debugging Presentation Failures in Web Applications. In Proceedings of the 9th IEEE International Conference on Software Testing, Verification and Validation (ICST 2016), Chicago, USA, April 2016.

Duc Minh Le*, **Pooyan Behnamghader* (co-first author)**, Joshua Garcia, Daniel Link, Arman Shahbazian, and Nenad Medvidovic. 2015. An empirical study of architectural change in open-source software systems. In Proceedings of the 12th Working Conference on Mining Software Repositories (MSR '15). IEEE Press, Piscataway, NJ, USA, 235-245.

Academic Experience

Department of Computer Science, University of Southern California, USA

Doctoral Student under supervision of Dr. N. Medvidovic **August 2013, June 2016**
Extending and improving ARCADE, a software workbench that employs a suite of architecture-recovery techniques and metrics for different aspects of architectural change
- *WWW:* `http://softarch.usc.edu/wiki/doku.php?id=arcade:start`

Developing a toolset to use cloud computing in order to semi-automatically run large-scale software architecture recovery analyses on the history of systems in software repositories

Improving Mahjong, a distributed software system that uses idle cycles on remote but networked computers to solve NP-complete problems
- *WWW:* `https://people.cs.umass.edu/~brun/Mahjong/`

Department of Informatics, University of Zurich, Switzerland

Visiting Doctoral Student under supervision of Dr. H. Gall **May - September 2015**

Studying the scalability, re-usability, and reliability of empirical studies in programming analysis
Studying architecture-centric benchmarking of Infrastructure As A Service (IaaS) and Mobile Backend As A Service (MBaaS)

School of Computer and Communication Science, EPFL, Switzerland

Undergraduate Research Assistant of Dr. C. Petitpierre **May - August 2012**

Developing a DSL using Xtext framework for generating Android Interfaces
Developing a compiler using Xtext for compiling Xtend templates
Developing a parser using JavaCC parser generator for parsing Xtext files

School of Electrical and Computer Engineering, University of Tehran, Iran

Undergraduate Research Assistant of Dr. F. Ghassemi **September 2012, May 2013**

Providing a state space generator for process terms of Restricted Broadcast Process Theory (RBPT) extended with abstract data types, a formal framework for specification and verification of Mobile Ad-hoc Networks, by translating the specifications to ML
- *WWW:* `http://fghassemi.adhoc.ir/RBPT.html`

Undergraduate Teaching Assistant in the following courses: **September 2011, May 2013**

System Analysis and Design
Software Engineering
Programming Languages
Design and Analysis of Algorithms
Advance Programming

Undergraduate Research Assistant of Dr. M. Raisee **May - December 2011**

Developing numerical solvers using OpenFoam CFD software package for the problem of Fluid Dynamics Modeling of Advanced Oxidation Process in UV-H2O2 Photoreactors

Startup Experience

AmberMelon Smart Watch, Los Angeles, USA

Co-founder and Technical Lead **September 2015, May 2016**

Developing an Android launcher application based on AmberMelon educational requirements.
Developing a cloud-based server-less educational platform for AmberMelon on Amazon AWS.
Leading Android and iOS mobile app development teams.
Partnerships with Qualcomm, Pegatron Corp. Ingenic Semiconductor Co, and Compal Electronics Inc.

Huntus Sharing Economy Platform, Los Angeles, USA

Co-founder and Technical Lead **February 2015, March 2016**

Developing a cross platform application using Xamarin for client-side of Huntus sharing economy platform
Developing a cloud-based back-end on Microsoft Azure

Basir Tech., Tehran, Iran

Computer Vision Developer **May - September 2007**

Developing computer vision techniques based on neural networks for license plate recognition

Leadership Experience

Department of Computer Science University of Southern California, USA

President of the Computer Science PhD Student Committee **August 2015, May 2016**

Board Member of the Computer Science PhD Student Committee **January 2014, July 2015**

School of Electrical and Computer Engineering, University of Tehran, Iran

Secretary of the ACM Student Chapter **August 2010, July 2011**

Four times worlds top-five ACM Student Chapter Excellence Award winner since 2011

Secretary of the Representatives Community **July 2009, May 2010**

Computer Skills

- Languages: Java, C++, Bash, LaTeX
- Platforms: Android Open Source Platform, Amazon AWS
- Operating Systems: Unix/Linux, Windows.