Pooyan Behnamghader

PhD Student
Department of Computer Science
University of Southern California

Updated: July 10, 2016
E-mail: pbehnamg@usc.edu
WWW: `www.behnamghader.net`

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 — Anticipated 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 in class of 103
- Advisor: Fatemeh Ghassemi

Honors and Awards

Recipient of Provost's Ph.D. Fellowship 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 Summer@EPFL scholarship — 2012

Ranked 3rd in the 16th Iran National University Students' Olympiad in Computer Eng. — 2011
Qualified to pursue graduate studies in any Iranian university with full
Member of Iran's National Elites Foundation and received multiple grants

Ranked 11th in the 12th Regional Contest of ACM ICPC in Asia region — 2010
Member of University of Tehran's 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. (accepted subject to minor revisions.)

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.
- Developing a tool-set 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.

Department of Informatics, University of Zurich, Switzerland
Visiting Doctoral Student under supervision of Dr. H. Gall — May - September 2015
- Studying scalability, re-usability, and reliability of empirical studies in software engineering.

- 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.

Undergraduate Teaching Assistant September 2011, May 2013
- Design and Analysis of Algorithms (head-TA), System Analysis and Design (head-TA)
- Software Engineering, Programming Languages, 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, California USA
Co-founder and Technical Lead September 2015, May 2016
- Developing a customize Android launcher application.
- Developing a cloud-based server-less platform for AmberMelon on Amazon AWS.
- Leading Android and iOS mobile app development teams.
- Partnerships with Qualcomm, Pegatron, Ingenic, and Compal.

Huntus Sharing Economy Platform, Los Angeles, California USA
Co-founder and Technical Lead February 2015, March 2016
- Developing a cross platform application using Xamarin.
- 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 recipient of world's top-five ACM Student Chapter Excellence Award since 2011.

Secretary of the Representatives Community July 2009, May 2010

Areas of Expertise

Software Platform: Android Open Source Platform, Android Application Framework
Cloud Platform: Amazon Web Services
Compiler Design: Xtext, JavaCC
Discrete Mathematics: Graph Theory, Set Theory, Dynamic Programming