Hamed Barzamini

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Education

2020–present	**PhD in Computer Science; GPA: 3.87/4**, *Northern Illinois University(NIU), DeKalb, US*
2012–2015	**Master of Science in Software Engineering; GPA: 16.57/20 (3.45/4)**, *Shahid Beheshti University(SBU), Tehran, Iran*, Graduation October 2015
2008–2012	**Bachelor of Science in Software Engineering; GPA: 17.69/20 (3.81/4)**, *University of Mazandaran, Babolsar, Iran*, Graduation January 2012, Graduated with the highest GPA
2007	**Highschool Diploma in Mathematics and Physics; GPA: 18.14/20 (3.87/4)**

Publications

Journal **Hamed Barzamini** , M. Rahimi and H. Alhoori and, M. Shahzad, *"A multi-level semantic web for hard-to-specify domain concept, Pedestrian, in ML-based software"*, Journal of Requirements Engineering, *2021*

Hamed Barzamini and Mona Ghassemian, *"Comparison Analysis of Electricity Theft Detection Methods for Advanced Metering Infrastructure in Smart Grid"*, International Journal of Electronic Security and Digital Forensics, *2019*

H. Dahmardeh, M. Zareh, A. Mirzadeh. Ph, **H. Barzamini,** N. Nouruzi *"Brain Emotional Learning Basic Intelligent Control for Congestion Control of TCP Networks"*, journal of Basic and Applied Scientific Research, *2013*

Conference **Hamed Barzamini** M. Rahimi, F. Nazaritiji and, D. Brockmann, *"W-AIS: A Framework for Knowledge-Inspired Enhancement and Explanation of Visual Intelligence in AI-enabled Software"*, Submitted On 45th International Conference on Software Engineering (ICSE 2023), *2022*

Hamed Barzamini and, M. Rahimi , *"B-AIS: An Automated Process for Black-box Evaluation of Visual Perception in AI-enabled Software against Domain Semantics"*, The 37th IEEE/ACM International Conference on Automated Software Engineering, *2022*, acceptance rate: 17%

Hamed Barzamini and, M. Rahimi, *"CADE: The Missing Benchmark in Evaluating Dataset Requirements of AI-enabled Software"*, The 30th IEEE International Conference on Requirements Engineering, *2022*, acceptance rate: 20%

Hamed Barzamini , M. Rahimi and H. Alhoori and, M. Shahzad, *"Improving Generalizability of ML-enabled Software through Domain Specification"*, 1st International Conference on AI Engineering – Software Engineering for AI, *2022*

Hamed Barzamini and Mona Ghassemian, *"Identification of energy theft in smart energy grid using principal components analysis technique"*, Smart Grid Conference (in Persian), *2015*

Research Experience

2019 Using AI and Machine Learning Technologies to Improve Customer Experience at Shopping Malls and Retailers at Shahid Beheshti University

2018	Using Machine Learning and Big Data to Improve the Web User Experience at Shahid Beheshti University
2018	A Real-Time Anomaly Detection System For Operational Time Series Metrics at Shahid Beheshti University
2016	Designing and Developing a Framework for Profiling and Auto-Learning of a Website User Behavior at Shahid Beheshti University
2012	Software Architecture for Big data systems, (Project of Software Architecture Course).
2010	Teamwork, Implementation of Video Chat, (Project of Computer Networks Course, Bachelor of Science)
2010	Teamwork, Design and Implementation of Automation System of Traveling Agency, (Project of Database Course, Bachelor of Science)

Honors

2013	Accepted as an honored student to Software Engineering M.Sc. program in Shahid Beheshti University by passing the required entrance exam.
2013	Ranked 183rd among 11000 participants in national-wide university entrance exam for M.Sc. degree in Software Engineering.
2012	Ranked 1st among B.Sc. graduates of University of Mazandaran.
2008	Top 5%, Nationwide university entrance exam, 2008.
2006	Elected student in mathematics student Olympiad exam of Golestan province, 2006.

Research Interests

Big Data Analytics

Deep Learning

RE4AI

Work Experience

Jun 2021 — Present	**Research Assistant**, **Northern Illinois University** *DeKalb, US* ○ Requirements Engineering for ML-base software components
Aug 2020–May 2021	**Teaching Assistant**, **Northern Illinois University** *DeKalb, US* ○ Spring 2021: Computer Architecture and Systems Organization ○ Fall 2020: Computer Programing in C++ *C/C++/Assembly/Python/Linux Shell*
Nov 2015–Apr 2020	**Research Software Engineer**, **Shahid Beheshti University** *Tehran, Iran* ○ Parallelization and performance optimization on multiple pedestrian detection algorithms. ○ Implementing DevOps life-cycle with Gitlab ○ Developing a module to analyze and detect big data patterns in operational time series metrics ○ Knowledge management and product development for AI applications. ○ Integrated software engineering standards into group daily practices. ○ Develop a module to analyse user data log to improve the web user experience ○ Implementing TDD methodologies for developing new software ○ Designed and developed large Django soft-ware systems to gather information about user activity at website. *Python/Django/Flask/TensorFlow/PyTorch/Cython/C/C++/Java/JavaScript/Gitlab/Matlab/Linux Shell*

Teaching Experience

2021	Teaching Assistant Computer Architecture and Systems Organization Course, Department of Computer Sciences Northern Illinois University, DeKalb, US.

2020	Teaching Assistant Programming Principles in C++ Course, Department of Computer Sciences Northern Illinois University, DeKalb, US.
2013	Graduate Teaching Assistant Software Engineering Course, Department of Computer Sciences and Engineering Shahid Beheshti University, Tehran, Iran.
2011	Operating System Lab Tutor, Department of Information Technology, University of Mazandaran , Babolsar, Iran.

Computer skills

Basic	HTML, CSS, JavaScript, SVN, UML, LaTeX, java, Nginx, Docker
Intermediate	TensorFlow, PyTorch, C/C++, Django, git, Elasticsearch, MySQL, logstash, filebeat
Advanced	Python, Shell Script, Linux, Apache HTTP Server, Matlab

Relevant Coursework

Applied Machine Learning

Artificial Intelligence (AI)

Algorithms Analysis and Design

Software Engineering