Shayan Hashemi

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Education

2020–Present **Ph.D. in Information Processing Science,** Department of Information Technology and Electrical Engineering, University of Oulu, Finland.
Supervisor: Prof. Mika Mäntylä.
Research Topic: Software Log Anomaly Detection.

2016–2019 **M.Sc. in Computer Engineering, Software,** Department of Electrical and Computer Engineering, Isfahan University of Technology, Iran.
Supervisor: Dr. Mehran Safayani.
Research Topic: Visual Question-Answering.

2010–2016 **B.Sc in Computer Engineering, Software,** Department of Computer, Azad University - Najafabad Branch, Iran.
Project Advisor: Dr. Mehdi Jabalameli.

Publications

S. Hashemi and M. Mäntylä. "OneLog: Towards End-to-End Learning in Software Log Anomaly Detection".

S. Hashemi and M. Mäntylä. "SiaLog: Detecting Anomalies in Software Execution Logs using the Siamese Network" [Link].

S. Hashemi, M. Safayani, and A. Mirzayi. "Multiple answers to a question: a new approach for visual question answering" [Link].

M. Mäntylä, M. Varela, and **S. Hashemi**. "Pinpointing Anomaly Events in Logs from Stability Testing – N-Grams vs. Deep-Learning" [Link].

Articles

Neural Knapsack, *Solving the knapsack problem using neural netwoks*, [Link].

Neural Cryptography, *Neural embedding of a message into an image using deep neural networks*, [Link].

Research Experiences

2020-Present **Doctoral Researcher**, *Software log anomaly detection*, University of Oulu.

2017-2019 **Master's Thesis Researcher**, *Multi-answer visual question answering using deep neural networks*, Isfahan University of Technology.

Teaching Experiences

Spring 2012	Teaching assistant for **Advanced Programming**, *Department of Computer, Azad University - Najafabad Branch, Iran.*
Fall 2012	Teaching assistant for **Principles of Computer and Programming**, *Department of Computer, Azad University - Najafabad Branch, Iran.*
Spring 2018	Teaching assistant for **Operating Systems**, *Department of Electrical and Computer Engineering, Isfahan University of Technology, Iran.*
Fall 2018	Teaching assistant for **Advanced Programming**, *Department of Electrical and Computer Engineering, Isfahan University of Technology, Iran.*
Spring 2022	Teaching assistant for **Next Generation of Software Engineering**, *Department of Information Technology and Electrical Engineering, University of Oulu, Finland.*

Work Experiences

Jan 2020 - Now	**AI Researcher**, *University of Oulu*, Software Log Analysis Research.
Dec 2018 - Apr 2019	**Junior AI Researcher**, *Isfahan University of Technology*.
	○ During two years of research in visual question answering, I introduced a new topic suggesting that a question may have multiple correct answers within a single image. Furthermore, I presented a solution that integrates previous object detection methods with visual question-answering models and utilizes that to produce the answer. My research was published as a paper named ""Multiple answers to a question: a new approach for visual question answering" [Link]."
Mar 2015 - Aug 2016	**Senior Software Engineer**, *Betternet Technologies*.
	○ I developed the Betternet iOS app from scratch using UIKit and Objective-C ([Link])
	○ Contributed to the development of Betternet Android app using Java ([Link])
	○ Part of a two-persons team responsible for client part of a new VPN protocol called Hexatech for Linux, iOS, Android using C++, Java, JNI, and Objective-C
	○ Developed multiple embedded system services for the smart router device called "Betterspot" ([Link]). The router passes the entire traffic of its clients through a VPN tunnel. I used C/C++ for developing the embedded system services, such as switching VPN services and changing the LED color, and Lua for web services.
Jan 2013 - Jan 2014	**Senior Software Engineer**, *Zana Mob Co.*
	○ I got involved in multiple Android application development projects
May 2010 - Oct 2012	**Junior Software Engineer**, *BASA Co.*
	○ Responsible for software and service maintenance of Isfahan province portal
	○ Developed multiple Liferay-based portlet for Isfahan province portal
	○ Contributed to localization of a retail shop management software called "Retail Pro"
	○ Developed a new web site for BASA Co

Certificates

Coursera
- ○ Improving Deep Neural Networks, *Deeplearning.ai*
- ○ Structuring Machine Learning Projects, *Deeplearning.ai*
- ○ Convolutional Neural Networks, *Deeplearning.ai*
- ○ Sequence Models, *Deeplearning.ai*
- ○ Natural Language Processing, *HSE University*
- ○ Sequence, Time Series and Prediction, *Deeplearning.ai*
- ○ Natural Language Processing with Sequence Models, *Deeplearning.ai*
- ○ Natural Language Processing in TensorFlow, *Deeplearning.ai*

Collaborations

- ○ As a freelancer, I undertook a natural language processing software project to detect spam emails in Persian. I was responsible for designing, implementing, and deploying an NLP model to analyze email contents and detect spam.
- ○ As a freelancer, I developed customer and collector application for iOS and Android for recycling collection company. I used Java to implement the Android applications and Use UIKit and Swift for iOS applications.
- ○ An intelligent software for pin pointing anomalous log lines in large stability test logs. I was responsible with parsing log messages into machine processable vectors.

References

1 **Professor. Mika Mäntylä**, *Department of Information Technology and Electrical Engineering, University of Oulu, Finland.*
mika.mantyla@oulu.fi

2 **Iman Rahmatizadeh**, *Google, California, USA.*
imanrahmati@google.com

3 **Morteza Milani**, *Klue Labs Vancouver, BC.*
morteza@klue.com

4 **Dr. Mehran Safayani**, *Department of Electrical and Computer Engineering, Isfahan University of Technology, Iran.*
safayani@cc.iut.ac.ir

5 **Dr. Abdolreza Mirzaei**, *Department of Electrical and Computer Engineering, Isfahan University of Technology, Iran.*
mirzaei@cc.iut.ac.ir

6 **Dr. Mehdi Jabalameli**, *Department of Computer, Azad University Najafabad Branch, Iran.*
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