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Kamyar Setayesh Ghajar

Curriculum Vitae

About Me Experienced Software Engineer with a demonstrated history of working in the computer software industry and data science. Skilled in System Design, Backend Development, Mobile Applications, and Video Game Programming. Strong engineering professional with a Bachelor of Engineering(B.Sc.) from Shahid Beheshti University and a Masters of Engineering(M.Sc.) from the University of Tehran focused on Computer Software Engineering. Researched on fields like Natural Language Processing(NLP), Conversational Information-Retrieval(Search) and Human-Computer interaction in information systems, specially Dialogue Systems and Information-Seeking Conversational Systems. Senior technical specialist of search solution on map and GIS data(OpenStreetMaps) in the most renowned ride service hailing company in Iran(Snapp!). Also co-founder and former moderator of Shahid Beheshti University's Video-Game Laboratory.

Work Experience

May 2021 - Present, Teaching Assistant, David R. Cheriton School of Computer Science - University of Waterloo

March 2019 - April 2021, Senior Software Engineer, Snapp!

Snapp! is the most well-known transportation network company in Iran offering services that include peer-to-peer ridesharing, ride service hailing, food delivery, hotel & flight reservations, and a bicycle-sharing system.

- Search engine design and development on map(OpenStreetMaps) data
- GoLang, Java and Python backend services
- Elasticsearch(ELK) based services tune and modification for search and LTR using RankLib
- Use NLP & IR techniques to improve user search experience to find places on map in English & Persian

November 2018 - June 2019, Tech Specialist(part-time), Arya Samaneh

Expert NLP and HCIR system design and development for a smart chat-bot platform using conversational information retrieval and natural language processing techniques for an AI back-end using RASA and Elasticsearch.

- Webapp development (HTML5/CSS) and SEO
- Backend service development with NodeJS

January 2019- March 2019, Software Engineer, Bamilo

One of the most popular online markets of Iran.

- Search engine for shopping experience (elasticsearch)
- Shopping experience webapp development

April 2016 - May 2018, Lead Software Engineer, A1Paradise

- Software services architecture design
- Cloud messaging solution
- VoIP/WebRTC Solution (Video/Voice call solution)

October 2013 - April 2015, Software Engineer, Simulator-Developer

- Design and development of loader-bulldozer simulator
- Unity3D frontend with C#.Net backend

Education

2020 - Present, University of Waterloo

Ph.D. in Computer Science

- Focus: Deep Active Learning for High Recall Information Retrieval, under supervision of Prof. Charles L. A. Clarke and Prof. Mark D. Smucker
- Cumulative GPA: 4.0 out of 4.0 (91.25/100)

2017 - 2020, University of Tehran

M.Sc. in Computer Software Engineering

- Thesis: Response Retrieval & Generation in Information-Seeking Conversational Systems, under supervision of Prof. Azadeh Shakery.
- Cumulative GPA: 4.0 out of 4.0 (18.35/20)

2011 - 2016, Shahid Beheshti University

B.Sc. in Computer Software Engineering

- Thesis: Adaptive Video Game Difficulty with Data Analysis in Unity3D, under supervision of Prof. Ramak Ghavamizadeh Meibodi.
- Cumulative GPA: 3.0 out of 4.0 (15.00/20)
- Cumulative GPA (Last two years): 3.2 out of 4.0 (15.40/20)

Professional Skills

Research

- | | | |
|-----------------|-----------------|-----------------|
| ◦ PyTorch | ◦ TensorFlow | ◦ Elasticsearch |
| ◦ Apache Lucene | ◦ Sci-Kit Learn | ◦ Gensim |
| ◦ Transformers | ◦ | ◦ Gensim |

Programming

- | | | | |
|--------------|----------|---------|--------------|
| ◦ Python | ◦ Java | ◦ C++ | ◦ GoLang |
| ◦ C# | ◦ PHP | ◦ Swift | ◦ JavaScript |
| ◦ TypeScript | ◦ jQuery | ◦ HTML5 | ◦ CSS |
| ◦ NodeJS | ◦ SQL | ◦ NoSQL | ◦ Scala |

General

- | | | | |
|-------------------|--------------|------------------|-----------|
| ◦ \LaTeX | ◦ MS Office | ◦ WordPress | ◦ Xcode |
| ◦ Visual Studio | ◦ R-Studio | ◦ Android Studio | ◦ PyCharm |
| ◦ IntelliJIDEA | ◦ PostgreSQL | ◦ mongoDB | ◦ Redis |
| ◦ Unity3D | ◦ Kafka | ◦ RabbitMQ | ◦ WebRTC |
| ◦ Docker | ◦ OpenShift | ◦ AWS | ◦ Azure |

Honors & Awards

2017, *Ranked 2nd, Iran's National M.Sc. Entrance Exam*

Information Technology & Computer Engineering master's degree entrance exam among more than 40,000 other graduate students from top universities of Iran.

2008, *Student of Honor, Allameh Tabatabaei School - Mathematics*

Ranked #1 in one of the most well-known schools of Tehran, Iran.

Interests

Professional

Deep Learning, Information Retrieval, Conversational Systems, Natural Language Processing, Data Analysis, Software Architecture Design

Personal

Technology, Video Games, Movies & Series, Music, Running, Cooking, Hanging Out

Language Proficiency

Persian

Native

English

Professional & Fluent

Turkish

Elementary

Arabic

Elementary

Publications

UWaterlooMDS at the TREC 2021 Health Misinformation Track

Mustafa Abualsaud, Irene Xiangyi Chen, Kamyar Ghajar, Linh Nhi Phan Minh, Mark D Smucker, Amir Vakili Tahami, Dake Zhang, Text REtrieval Conference (TREC), November 2021, Gaithersburg, Md. USA

Distilling Knowledge for Fast Retrieval-based Chat-bots

Amir Vakili, Kamyar Ghajar, and Azadeh Shakery. Accepted for publication in the 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR '20), July 2020, Xi'an, China

Rings: A Game with a Purpose for Test Data Generation

Saeed Amiri-Chimeh, Hassan Haghighi, Mojtaba Vahidi-Asl, Kamyar Setayesh-Ghajar, and Farshad Gholami-Ghavamabad. "Rings: A Game with a Purpose for Test Data Generation." *Interacting with Computers* 30, no. 1 (2017): 1-30.