Sahar Rahmani

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RESEARCH INTERESTS	
	⬦ Data Science Applications
	⬦ Semantic Technologies

EDUCATION

⬦ **M.Sc. in Computer Science with Specialization in Electronic Commerce**   Sept. 2017 – July 2020

· Department of Computer Engineering and Information Technology (CEIT), Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran

· CGPA: 18.64/20

· **Thesis**: Exploiting Data Lake to Improve Business Intelligence Generations.

 − Thesis Grade: 19.7/20

⬦ **B.Sc. in Information Technology Engineering**   Sept. 2011 – Aug. 2015

· Department of Computer & Information Technology Engineering, University of Kurdistan, Kurdistan, Iran

· CGPA: 15.62/20

· **Project**: Automating Kowsar Heart Hospital of Kurdistan by developing a .NET Web Application for patients to track their medical data, have access to the laboratory reports and view their treatment results and schedule appointments.

 − Project Grade: 18/20

HONORS AND AWARDS

⬦ **Ranked 3rd** based on GPA, among M.Sc. students of Department of Computer Engineering and Information Technology of AmirKabir University of Technology (Tehran Polytechnic) with CGPA of 18.64/20.   July 2020

⬦ **Ranked 44th** among 30.000 students in the annual National University Entrance Exam (a.k.a "Konkoor-Arshad") and got **admission to AmirKabir University of Technology (Tehran Polytechnic)**. Tehran Polytechnic is one of the top schools in the region and the university of choice for top ranking students in the university entrance exam and one of the top 400 leading schools around the globe.   September 2017

RESEARCH EXPERIENCE

⬦ **Research Assistant at *Intelligent Systems laboratory (ISLab)***   Sept. 2017 – July 2020

· Supervisor: Professor *Ahmad Abdollahzadeh Barfourosh*

· In ISLab, we work on developing methods and approaches for creating ontologies of world realities especially in the field of computer science and engineering. We investigate ontology creation from all levels and views. We test and implement different methodologies of ontology creation. Also we test different ontology editors and define their weakness and strengths. In short we explore ontology from each any every angle and perspective.

INDUSTRIAL EXPERIENCE

⬦ **Web Application Developer at *Novin Hi-Tech Solutions***   July 2020 - Present
Novin Hi-Tech Solutions is a knowledge-oriented, learning, innovative and forward-looking company which operates in line with professional developments in the fields of banking, insurance and stock market activities. I am currently working there in Internet Banking Team As a Web Application Developer using web form technology and c# to develop the web application.

⬦ **Desktop Developer at *ZamZam***   Summer 2015 - Aug. 2017
ZamZam Plastic Industries Co. is one of the biggest manufactures of polyethylene pipes and fitting products for water, gas supplies and sewer in Iran.

TEACHING EXPERIENCE

⬦ **Teaching Assistant**

 ⬦ **AmirKabir University of Technology (Tehran Polytechnic)**

- Information Technology Strategic Planning (ITSP)
- Operating Systems Laboratory
- Electronic Payment Systems
- Applications of Social Networks Analysis in Electronic Commerce

⋄ **University of Kurdistan (UoK)**

- Fundamentals of IT
- Operating Systems

PUBLICATIONS

⋄ **Proposing a Framework for Comparative Comparison of Different Generations of Business Intelligence Systems**
  · Authors: ***Sahar Rahmani*** and Ahmad Abdollahzadeh Barfourosh
  · Accepted in *Journal of Research Studies in Computer Engineering and Information Technology* - 2020

⋄ **Semantic Data Governance in Data Lakes by Ontology Engineering**
  · Authors: ***Sahar Rahmani*** and Ahmad Abdollahzadeh Barfourosh
  · Submitted to *Journal of Research Studies in Computer Engineering and Information Technology* - 2021

DATA SCIENCE SKILLS & APPLICATIONS

⋄ **Principals of Data Science & Machine Learning**: Mechanisms with respect to data preparation and algorithms for reducing data size (feature selection) and techniques on how to use ML algorithms in SQL server under Python programming language were practiced
  · Practiced Tools:

    - Scikit
    - Matplotlib
    - Numpy
    - Pandas

⋄ **Data Mining by Integration Service & Analysis Service in SQL Server (SSIS & SSAS)**: The basic concepts of data mining and its applications along with crisp methodology in the real world development.
  · Practiced Tools, Techniques & Concepts:

    - Classification & Regression Algorithms
      * Linear & Logistic Regression
      * Evaluation Methods (LMSE, MSE)
      * Decision Tree
      * Random Forest
      * Evaluation Methods (Confusion Matrix, ROC, AUC, F1 Score)
    - ETL
    - Data Warehousing & OLAP
    - Data Cleaning
    - Clustering
      * Density Based, Hierarchical, Grid Based

⋄ **Data Reporting by Integration Service in SQL (SSRS)**

    · Matrix Report
    · KPI
    · PowerBI
    · Shape
    · Bing Map
    · Mobile Report Publisher

⋄ **Principals Natural Language Processing**: Text pre-processing operations, feature extraction, and text summarization techniques were practiced.
  · Practiced Tools, Techniques, and Concepts:

    - Auto Tagging
    - Data Parsing
    - Parsivar
    - Nltk
    - Lemmatizer
    - NER
    - Stop Work
    - Chunker & N-Gram
    - POS Tagger
    - BOW
    - VSCode
    - TFIDF

◇ **Data Science Applications**:

· Recommender Systems
· Optimization
· Fraud Detection

· Social Network Analysis

· Natural Language Processing

GENERAL
SKILLS

◇ **Programming**

· ***Desktop/Back End***: Visual Basic.NET, Java, C, C++, C#, Python

· ***Web/Front End/DB***: ASP.NET, HTML5, CSS, JavaScript, Bootstrap, SQL Server

· ***Frameworks***: .Net

◇ **Tools**: Microsoft Visual Studio, Microsoft SQL Server Management Studio, Microsoft PowerBI, Eclipse, IntelliJ, Protege, JIRA, Git, Gephi, Pajek, CPN-Tools, Weka, Magento, Pycharm, VMware Workstation, Adobe Photoshop LaTeX.

◇ **Methodologies**: Scrum, Crisp

◇ **Operating Systems**: Windows, Linux-CentOS7 (Cert: LPIC-1)

LANGUAGES

◇ **English** (Fluent)

◇ **Persian** (Native)

◇ **Kurdish** (Native)

RELATED
COURSES

◇ **Master's Relevant Coursework**

· Business Intelligence (17/20)
· Electronic Payment Systems (19.9/20)
· Electronic Commerce Systems Security (18.1/20)
· Electronic Commerce Systems Engineering (19.25/20)

· Advanced Databases (17/20)

· Business Process Re-Engineering (18.5/20)

· Applications of Social Network Analysis in Electronic Commerce (20/20)

◇ **Bachelor's Relevant Coursework**

· E-Commerce (19.04/20)
· Information Maintenance Management in IT (18.75/20)
· Advanced Programming (17/20)
· Artificial Intelligence (19/20)

· Fundamentals of Information Technology (17/20)

· Multimedia Systems (20/20)

· Strategic Management of Information Technology (19.5/20)

REFERENCES

◇ Ahmad Abdollahzadeh Barforoush [M.Sc. Thesis Supervisor]

· Professor at Department of Computer Engineering, Amirkabir University of Technology (Tehran Polytechnic). *Homepage Link*. *Email Address: ahmadaku@aut.ac.ir*. Phone Number: (+98)21 64542733

◇ S.Alireza Hashemi Golpayegany [M.Sc. Thesis Referee]

· Associate Professor at Department of Computer Engineering, Amirkabir University of Technology (Tehran Polytechnic). *Homepage Link*. *Email Address: sa.hashemi@aut.ac.ir*. Phone Number: (+98)21 64542726

◇ Alireza Abdollahpouri [B.Sc. Project Supervisor]

· Associate Professor at Faculty of Engineering, Department of Computer Engineering, University of Kurdistan. *Homepage Link*. *Email Address: abdollahpouri@uok.ac.ir*. Phone Number: (+98)87 33664600