

Hossein Rajaby Faghihi

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EDUCATION

M.Sc. Computer Engineering – Software & Systems (2016 – 2018)

Sharif University of Technology – Tehran, Iran

(1st Iran University in QS Ranking) - **GPA: 3.48**

Supervisors: Dr. Jafar Habibi – Dr. Mohammad Amin Fazli

Thesis: A Framework for situation recognition in IOT Environments

B.Sc. Computer Science (2012 – 2016)

Amirkabir University of Technology – Tehran, Iran

(2nd Iran University in QS, Times, Shanghai university Ranking) - **GPA: 3.94**

AWARDS AND HONORS

- **23rd rank in Artificial Intelligence Ph.D. National Exam of Iran. (participants: 1249)**
- **31st rank in Computer Engineering Master of Science National Exam of Iran (participants: 35000)**
- **1st rank among B.Sc. Students of Computer Science in Amirkabir University of Technology (2012-2016)**

RESEARCH INTERESTS

- Knowledge Reasoning and Representation
- Context-Aware Applications
- Intelligent Human-Computer Interaction Design
- Ubiquitous Computing and Internet of Things
- Artificial intelligence appliances in healthcare and educational systems
- Learning User Behavior and Recommendation Systems
- Ubiquitous computing and sensing to help in elderly people life.
- Augmented\Virtual reality approaches toward better Human-Computer interaction
- Natural language processing
- Machine Learning techniques
- Software Automation

WORK EXPERIENCES

- **CTO – Vanda Andisheh Amirkabir (2016 – Present)**
 - Manage developer teams
 - Choose technology stack for each program
 - Requirement engineering
 - Architecture design
 - Bridge from management team to developer team
 - Test and feedback gathering
 - Design technical program
- **Project Leader – Vestaak (2016 – Present)**
 - Form and manage teams
 - Enhance members knowledge
 - Project idea development
 - Issue tracking
 - Intern management
 - Requirement engineering
 - Technical planning
 - Knowledge management
 - Design software developing cycles
 - Web developing and design

- Freelance Developer (2015 – Present)
 - Mobile developing
 - Web developing
 - Web design
- Software Engineer – Illa Software (2013 – 2014)
 - Bash programming
 - Algorithm design
 - C++ programming in distributed environments

TEACHING

- Teacher Assistant, Semantic web, Sharif university of Technology(2018 – Present)
 - Dr.M.Amini
 - Design questions, Manage student projects, Answer student questions, Correct student quizzes
- Teacher Assistant, Principles of Database Design, Sharif University of Technology (2016-2017)
 - Dr.M.Amini
 - Design questions, Manage student projects, Answer student questions, Correct student quizzes
- Teacher Assistant, Design & Analysis of Algorithms, Amirkabir University of Technology (2015-2016)
 - Dr.F.Zare
 - Design questions, Manage student projects, Answer student questions, Correct student quizzes, Hold classes
- Teacher Assistant, Introduction to the Theory of Computation, Amirkabir University of Technology (2014-2016)
 - Dr.F,Zare
 - Design questions, Manage student projects, Answer student questions, Correct student quizzes, Hold classes
- Technical Teacher, Web Developing, Vestacamp (2015-Present)
- Technical Teacher, Web Design, Vestacamp (2015-2017)
- Technical Teacher, Principals of Programming Languages and Algorithms, Vestajunior (2016-2017)
- Technical Teacher, Python/Flask Programming (2018-Present)
- Presenter, Web Developing Workshop, Vestacamp (2017-2018)

PUBLICATIONS and PRESENTATIONS

- **Hossein Rajaby Faghihi**, Jafar Habibi, Ehsan Shafiee, **Enhancing SitOpt Approach in Situation Awareness using Hybrid Learning Techniques** – 23th Conference of National Computer Society of IRAN–2018 <http://csi.org.ir/en/paper/view/id/2539>
- **Hossein Rajaby Faghihi**, Jafar Habibi, Mohammad Amin Fazli, **Hybrid-Learning approach toward situation recognition and handling**, ACM Transaction on Computer Systems– (in the process of submission)
- **Hossein Rajaby Faghihi**, Roshanak Mirzaee, Ehsan shafie , **A three layered IOT framework with seperation of concerns, adaptations and extensibility**, 5th International Conference on Web research – (in the process of translation)

RESEARCH

- A smart suggest system for students interested in applying abroad
 - Supervised learning, Unsupervised learning, Python, Data crawling, Mapping algorithms and idea, Lost data handling
- Game Theory, Survey on game theory usages in IOT
- Game Theory, application enabled situation awareness by game theory approaches

- Supervisor: Dr.M.Izadi
 - Punishing algorithms in game theory, Risk management by game theory
- Software Architecture, Evaluating and analyzing SaaS architecture
 - SaaS Requirement gathering, Architecture requirement , Evaluating architectures
- Software Architecture, Survey on Approaches to evaluate quality attributes
- Requirement Engineering, extracting and evaluating requirements for stock exchange system.
 - Supervisor: Dr.A.Heydarnoori
 - Goal elicitation, Requirement representation, Requirement analysis
- Ambient Intelligence, Survey on impacts and challenges
 - Supervisor: Dr.A.Nazari Shirejini
- Ambient Intelligence, Survey on Internet of Things Middleware
 - Supervisor: Dr.A.Nazari Shirejini
- Ambient Intelligence, Context modeling and awareness Survey
 - Supervisor: Dr.A.Nazari Shirejini
- Ambient Intelligence, Interaction Concepts and Design Survey
 - Supervisor: Dr.A.Nazari Shirejini
- Semantic Web Survey and improvement of Domain Specific Ontologies for aspect-based opinion mining
 - Supervisor: Dr.M.Amini

ACADEMIC PROJECTS

- Enhanced Resume Analyser
 - Supervised learning
 - Data preparation
 - Data crawling
- Social Media Topic Detector
 - Supervised learning
 - Telegram crawler
- Automatic Resume Analyser and Interview caller
 - Rule-based knowledge
 - Telegram CLI
 - Python crawling
- Paper Crawler & Integrator
 - Data preparation
 - Python crawling
 - Rule-based reasoning
- Data mining Approaches for paper and professors Data Extractor and future co-worker suggest
 - Supervised learning
 - Unsupervised learning
 - Data preparation
 - Data noise and lost information handling
- E-Learning System including encouragement tactics and crowdsourcing
 - Web developing
 - Gamification
 - Database design
 - Crowdsourcing techniques and evaluation
- Optimized Database Design for Social Media
 - Data base design
 - Data base normalization
 - Query generating
- Mini Java Compiler Using C++
 - Lexical analyser
 - Syntax parser
 - Semantic analyser

CURRENT RESEARCHES

- Using Case-Based Reasoning combining with semantic relations in recommender systems

- Status: Writing paper
- Case based reasoning
- Semantic relations
- Situation awareness through crowdsourcing
 - Status: early research
 - Crowdsourcing in dynamic environments
 - Unsupervised learning
- Conceptual Situation Aware Framework for pervasive computing
 - Status: writing paper
 - Situation-awareness
- Recommender systems
- Machine learning
- interior design
- Supervised learning
- Situation-awareness
- User modeling
- Adaption to user needs
- Hybrid-learning

SKILLS

- Scientific Knowledge
 - Machine Learning Techniques
 - Sklearn Library usage in machine learning
 - NLTK library usage in natural language processing
 - Human-Computer Interaction concepts
 - Deep Learning Concepts
 - Data mining Techniques and algorithms usage
 - Data Cleaning Techniques
 - Software Architecture patterns and solutions
 - Ambient intelligence concepts
 - Algorithm Design
 - Ontology and Semantical Approaches, SPARQL
- Programming Skills
 - PHP programming language, Laravel Framework, Lumen Framework
 - Python Programming Language, Django Framework, Flask Framework
 - JavaScript Programming Language, React.js, React Native, node.js
 - Web Design and Developing Skills, Sass, Less
 - API and Restful Design, JWT, GraphQL
 - Java, C++, C, Bash script, R, Kotlin
 - Spring Framework
 - Docker, Git, Ubuntu
- Databases
 - MySQL, PostgreSQL, SQLite, SQL Server, Mongo DB, Redis, Database Design
- Software
 - Latex, Matlab, protégé, Jupyter
- Mathematics
 - Linear algebra
 - Probability foundations and advance Probability
 - Graphs
 - Matrix concepts
 - High dimensional spaces
 - Complexity theorem
 - Combinatory foundations and advance
 - Linear optimization
 - Numeric analysis
 - Numeric linear algebra
- Language
 - English (Advanced)
 - Persian (native)
 - German (A2)

EXAMS

- Toefl Exam (Total: 109)

- Reading : 28
- Listening : 29
- Speaking : 24
- Writing : 28
- GRE general Exam (Total: 321 + 3.5)
 - Verbal : 152
 - Quantative : 169
 - Writing : 3.5

ADMINISTRATION

- Organizer of Vestaak Internship – internship events to prepare students for job titles after acquiring the required skills.
- Organizer of VESTACAMP – student preparation for job positions through courses.
 - Course holding, Presentation and workshop holding, Intern project holding
- Organizer of VESTAJUNIOR – student preparation events for university courses and professional paths through seminars and courses.
- Organizer of CSPLUS – student peer to peer learning through seminars and events
 - Seminar holding, Course holding, Camp holding

HOBBIES

- soccer – member of university team for 4 years
- swimming
- computer games
- movies

REFEREES

- Dr.M.Fazli
 - Sharif University of Technology, Assistant Professor
 - Computer Engineering Department
 - fazli@sharif.edu
- Dr.M.Amini
 - Sharif University of Technology, Assistant Professor
 - Computer Engineering Department
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- Dr.F.Zare
 - Amirkabir University of Technology, Assistant Professor
 - Mathematics and Computer Science Department
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- Dr.N.Tavana
 - Amirkabir University of Technology, Assistant Professor
 - Mathematics and Computer Science Department
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- Dr.M.Mirzakhah
 - Amirkabir University of Technology, Lecturer Professor
 - Mathematics and Computer Science Department
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- Dr.J.Habibi
 - Sharif University of Technology, Associative Professor
 - Computer Engineering Department

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