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 slack for each program
  - Requirement engineering
  - Architecture design
  - Bridge from management team to developer team
  - Test and feedback gathering
  - Besign 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**, A situation-aware User interface for smart homes –** (in Prep)

- **Hossein Rajaby Faghihi**, Jafar Habibi, Mohammad Amin Fazli**, Hybrid-Learning approach toward situation recognition and handling –** (in Prep)

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

- A situation-aware User interface for smart homes
  - Status: early research
  - User interaction
  - Situation-awareness
  - User behaviour learning
  - User adaption
  - Invisible interface design
- Situation awareness through crowdsourcing
  - Status: early research
  - Crowdsourcing in dynamic environments
  - Unsupervised learning
  - Supervised learning
  - Situation-awareness
  - User modeling
- Conceptual Situation Aware Framework for pervasive computing
  - Status: writing paper
  - Situation-awareness
  - Adaption to user needs
  - Hybrid-learning

SKILLS

- Scientific Knowledge
  - Machine Learning Techniques
  - Sklearn Library usage in machine learning
  - Human-Computer Interaction principals
  - 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
- Programming Skills
  - Python Programming Language, Django Framework, Flask Framework
  - PHP programming language, Laravel Framework, Lumen Framework
  - JavaScript Programming Language, React.js, React Native, node.js
  - Web Design and Developing Skills, Sass, Less and Css
  - API and Restful Design
  - Java, C++, C, Bash script
  - Spring Framework, Kotlin Programming Language
- Databases
  - MySQL, PostgreSQL, SQLite, SQL Server, Mongo DB, Database Design
- Software
  - Latex, Matlab, protégé
- Mathematics
  - Linear algebra
  - Probability foundations and advance
  - Graphs
  - Matrix concepts
  - High dimensional spaces
  - Complexity theorem
  - Combinatory foundations and advance
  - Linear optimization
  - Numeric analysis
  - Numeric linear algebra
- Language
  - English
    TOEFL=>109(R:28,L:29,S:24,W **:28)**
  - Persian (native)
  - German (A2)

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.J.Habibi
  - Sharif University of Technology, Associative Professor
  - Computer Engineering Department
  - JHabibi@sharif.edu
- 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
  - amini@sharif.edu
- Dr.F.Zare
  - Amirkabir University of Technology, Assistant Professor
  - Computer Science Department
  - F.zare@aut.ac.ir
  - +98 21 64545674
- Dr.N.Tavana
  - Amirkabir University of Technology, Assistant Professor
  - Pure Mathematics Department
  - nrtavana@aut.ac.ir
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