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

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

TEACHING

- Teacher Assistant, Principles of Database Design, Sharif University of Technology (2016-2017)
  - o Dr.M.Amini
  - o Design questions, Manage student projects, Answer student questions, Correct student quizzes
- Teacher Assistant, Design & Analysis of Algorithms, Amirkabir University of Technology (2015-2016)
  - o Dr.F.Zare
  - o 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)
  - o Dr.F,Zare
  - o 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

- o **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**

- o **Hossein Rajaby Faghihi**, Jafar Habibi, Mohammad Amin Fazli**, A situation-aware User interface for smart homes –** (in Prep)

- o **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
  - o 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
  - o Supervisor: Dr.M.Izadi
  - o 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

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

SKILLS

- Scientific Knowledge
  - o Machine Learning Techniques
  - o Sklearn Library usage in machine learning
  - o Human-Computer Interaction principals
  - o Deep Learning Concepts
  - o Data mining Techniques and algorithms usage
  - o Data Cleaning Techniques
  - o Software Architecture patterns and solutions
  - o Ambient intelligence concepts
  - o Algorithm Design
  - o Ontology and Semantical Approaches
- Programming Skills
  - o Python Programming Language, Django Framework, Flask Framework
  - o PHP programming language, Laravel Framework, Lumen Framework
  - o JavaScript Programming Language, React.js, React Native, node.js
  - o Web Design and Developing Skills, Sass, Less and Css
  - o API and Restful Design
  - o Java, C++, C, Bash script
  - o Spring Framework, Kotlin Programming Language
- Databases
  - o MySQL, PostgreSQL, SQLite, SQL Server, Mongo DB, Database Design
- Software
  - o Latex, Matlab, protégé
- Language
  - o English (advance) – TOEFL exam will be taken soon.
  - o Persian (native)
  - o 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.
  - o 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
  - o Seminar holding, Course holding, Camp holding

HOBBIES

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

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
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- Dr.N.Tavana
  - Amirkabir University of Technology, Assistant Professor
  - Pure Mathematics Department
  - nrtavana@aut.ac.ir
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