Hossein Rajaby Faghihi

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Birthday: 26 May 1996

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)

WORK EXPERIENCES

- CTO – Vanda Solutions (2018 – Present)
  As CTO I was responsible to design a complete technical flow for the organization. Manage projects and gather feedback from technical teams. I was responsible for evaluating time constraints and budgets in term of technology in use and to plan the best technical procedure according to constraints. I was a leader of developing Hamyad, Vidyad, Bazaarkhan and several other software programs.

- Project Leader – Vestaak (2016 – Present)
  My duties at Vestaak is a little bit different as a CEO. I designed a company to grow potential talents abilities through real used projects. I designed the projects myself and then managed them to develop. I was responsible to make assignments to the team and make sure that Deadlines would meet. We have experienced Projects Related to data science, web developing, web designing and either web scrapping. Working with a variety of programming languages and concepts from machine learning techniques to UI/UX principles was a challenge I accepted as a project team leader.

- Freelance Developer (2015 – Present)
- CTO – Vanda Andisheh Amirkabir (2015 – 2018)
  As CTO I was responsible to design a complete technical flow for the organization. Manage projects and gather feedback from technical teams. I was responsible for evaluating time constraints and budgets in term of technology in use and to plan the best technical procedure according to

constraints. I was a leader of developing several educational software during the period.

- Software Engineer – Illa Software (2013 – 2014)

RESEARCH INTERESTS

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

SKILLS

- Scientific Knowledge
  - Machine Learning Techniques usage
  - 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
  - API and Restful Design
  - Spring Framework, Kotlin Programming Language
  - JavaScript Programming Language, React.js, React Native
  - Web Design and Developing Skills, Sass, Less and Css
- Databases
  - MySQL, PostgreSQL, SQLite, SQL Server, Mongo DB, Database Design
- Software
  - Latex, Matlab

TEACHING

- Teacher Assistant, Principles of Database Design, Sharif University of Technology (2016-2017)
- Teacher Assistant, Design & Analysis of Algorithms, Amirkabir University of Technology (2015-2016)
- Teacher Assistant, Introduction to the Theory of Computation, Amirkabir University of Technology (2014-2015)
- Teacher Assistant, Introduction to the Theory of Computation, Amirkabir University of Technology (2015-2016)
- 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)

RESEARCH

- A smart suggest system for students interested in applying abroad
  The project was built to help students find out their chance to apply to universities. The process was about comparing user data with previous data from universities containing a map between universities and inference from them.
- Game Theory, Survey on game theory usages in IOT
- Game Theory, application enabled situation awareness by game theory approaches
  The survey was about usages of game theory inside IOT and a suggestion to use game theory for application enable situation identification framework.
  Supervisor: Dr.M.Izadi

- Software Architecture, Evaluating and analyzing SaaS architecture
  Analyzing SaaS requirements against already in use architectures and evaluate each one according to the gathered requirements.
  Supervisor: Dr.J.Habibi

- Software Architecture, Survey on Approaches to evaluate quality attributes
- Requirement Engineering, extracting and evaluating requirements for stock exchange system.
  Designing requirements and evaluate them for a stock exchange system
  Supervisor: Dr.A.Heydarnoori

- Ambient Intelligence, Survey on impacts and challenges
  In this survey, we discussed the most important aspects of ambient intelligence. The most important challenges, impacts and appliances today.
  Supervisor: Dr.A.Nazari Shirejini

- Ambient Intelligence, Survey on Internet of Things Middleware
  In this survey research, we have probed through past papers dealing with the concept of middleware in IOT. We discussed the most challenging aspects of designing a middleware for intelligent environments and the approaches already in use for this challenges.
  Supervisor: Dr.A.Nazari Shirejini

- Ambient Intelligence, Context modeling and awareness
  In this survey research, we have probed through past papers dealing with context concept and modeling in ambient intelligence. Discussing different approaches to model context and introduction to context awareness.
  Supervisor: Dr.A.Nazari Shirejini

- Ambient Intelligence, Interaction Concepts and Design
  In this survey research, we have probed through past papers dealing with human interaction in ambient intelligence. Categorizing issues, challenges and solutions and discussing each solution strengths and weaknesses.
  Supervisor: Dr.A.Nazari Shirejini

- Semantic Web Survey and improvement of Domain Specific Ontologies for aspect-based opinion mining
  In this paper, we discussed previous solutions for opinion mining and improved them using domain-specific ontology. The ontology helped us in many cases like aspect analysis and similar words.
  Supervisor: Dr.M.Amini

ACADEMIC PROJECTS

- Enhanced Resume Analyser
  The project was about extracting information into categories from pdf resume files.

- Social Media Topic Detector
  The project is a telegram crawler which finds out the topic of telegram channels. Channels are discovered by the robot itself from groups and other channels

- Automatic Resume Analyser and Interview caller
  Analyzing received resumes and assign a matching point to each one. Invite the top job seekers to interview using telegram CLI.

- Paper Crawler & Integrator
  The project was about finding papers related to professors from certain universities integrated data from professors and store them into data warehouses. The project was performed using python, scrapy and selenium

- Data mining Approaches for paper and professors Data Extractor and future co-worker suggest
  The issues were cleaning data and extracting some historical data at first to detect noise points and etc. then we made predictions on the count of number the professors are going to give papers next year and suggesting partners based on previous papers.

- E-Learning System including encouragement tactics and crowdsourcing
  The mission was to design an E-Learning platform for students and teachers collaborating together in term of courses and classes. Teacher questions are crowdsourced and the point assigning process was crowdsourced among students either. Students were encouraged to continue solving problems with feedback

- Optimized Database Design for Social Media
  The project was about designing and efficient database structure for social media including query building for several common requests. Designing complex queries and creating trigger events

- Mini Java Compiler Using C++
  The project was about designing and coding a minimal java compiler. The process began from lexical phase to the semantic phase of a compiler. The compiler itself was written in C++ language

PUBLICATIONS and PRESENTATIONS

Enhancing SitOpt Approach in Situation Awareness using Hybrid Learning Techniques – 23th Conference of National Computer Society of IRAN– 2018

Hossein Rajaby Faghihi, Jafar Habibi, Ehsan Shafiee
http://csi.org.ir/en/paper/view/id/2539

A situation-aware User interface for smart homes – (in Preparation)
Hossein Rajaby Faghihi, Jafar Habibi, Mohammad amin fazli

Hybrid-Learning approach toward situation recognition and handling – (in Preparation)
Hossein Rajaby Faghihi, Jafar Habibi, Mohammad amin fazli

CURRENT RESEARCHES

- A situation-aware User interface for smart homes
    User interfaces are one of the tools to interact with a user in nearly every Human-Computer interaction. Giving the power to see what's going on and what situation is the user in, would give the computer a better mental model to interact with the user and better services to represent.
- Situation awareness through crowdsourcing
    Situation awareness through machine learning is something with has been discussed a lot recently, although machine learning methods require lots of data to work accurately. This is a challenge to gather such a data required from a user or single installation. So here it comes crowdsourcing techniques for situation awareness.
- Conceptual Situation Aware Framework for pervasive computing
    Situation awareness plays a significant role when there are lots of sensors and actuators in an environment. Situation awareness gives the intelligent system the power to offer relevant services to the user in every different situation.

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.
    Vestacamp was an academy aiming to teach professional necessary skills to work with. Students joined the classes to learn about specific skills directly used inside job positions. We held like 40 courses and seminars in 2 years of work

- 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
    Csplus was designed to help students grow free of charge and by the concept of learning in groups. We searched and found talented and experienced students among others and invited them as lecturers for courses. Other students were welcome to join each interested field of their own and learn the basics of the skill. We held approximately 10-14 seminars and courses during 2 years of work

LANGUAGES
- **Persian** (Native)
- **English** (Advance) **-** TOEFL Exam will be taken soon

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
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- Dr.M.Amini
    - Sharif University of Technology, Assistant Professor
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- Dr.F.Zare
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- Dr.N.Tavana
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