Maryam Arab

Ph.D. student
Department of Computer Science
George Mason University, Fairfax, VA

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I study HCI to design programming tools by blending machine and human intelligence.
I designed a language for translating thought to words and implemented a compiler to parse the language to executable pieces of actions dividable between human and computer.

Research interests

Software tools design and development, human-computer interaction, programming tools, programming languages, compiler, data mining, crowdsourcing

Professional experience

Software developer March 2021-Present
Old Dominion University
Information Technology Services

Research Assistant May 2017-Present
Teacher Assistant January 2017- May 2017
George Mason University
Department of Computer Science, Volgenau School of Engineering

Intern May 2016 – August 2016
Nexus Direct
WordPress theme and custom fields, web developer

Research Assistant January 2015 –May 2016
Old Dominion University
Department of Computer Science

Software Developer 2013 –2014
Agah Information Co.
Design and development of "I Shop" (Java, Grails, Groovy)
Graphic and UI Designer (HTML, jQuery)
Website design and development (WordPress, PHP)

Software Developer, Network Admin 2011 –2013
Aryans Arzeshpardaz Investment Consulting Co.(AAICCO)
Designed and implemented holding software system and company's evaluation system (C#)
Automated Test (Asp .Net)
Network Maintenance - Team Foundation Server administration - SharePoint Portal
Software Developer 2007 – 2011
Shayen Informatics Co. (Asp .Net, C#, Java, HTML)

Education

Maryam Arab CURRICULUM VITAE

Doctorate in Computer Science and Human-Computer Interaction January 2017- Present
George Mason University
RESEARCH PROJECT: Exploring ways to describe programming skills more explicitly through programming strategies. Designed a language and implemented a compiler for parsing the strategies written in the designed language. Testing the implication of this study by designing and implementing a platform for sharing, using, requesting, and searching for strategies.
ADVISORS: Thomas LaToza (GMU, advisor), Amy Ko (UW, co-adviser)

Master's in computer science August 2014 - August 2016
Old Dominion University
THESIS: Detecting on-street parking spaces using pedestrian cellphone magnetometer internal sensor
Propose a sensor based Mobile application for detecting the curb side parking spot
Design a Mobile application to detect the street lane number in which the car is driven
ADVISOR: Tamer Nadeem (ODU, advisor)

B.S. in Electrical and Computer Engineering August 2002-February 2007
School of Engineering
Tehran Markaz University

Technical skills

Platforms	Ubuntu Linux, Windows, Mac
Programming Skills	Java, Android, C#, C++, ASP.net, PHP, Groovy
Web Development	HTML, CSS, JavaScript, XML, Grails, jQuery, JSON, Spring Framework, Hibernate, MVC, React, Angular, Node
Methodologies	Agile, OOAD, UML
Tools	IntelliJ Idea, Eclipse, MS Visual Studio .Net, Android Studio, WebStorm, Jupyter Notebook, PyCharm, Team Foundation Server, SharePoint Server, CVS, SVN, JUnit, Git
Database Management Systems	MySQL, MS SQL Server, Firebase, NoSQL

Publications

Maryam Arab, Thomas D. LaToza, Jenny Liang, and Amy J. Ko.
An exploratory study of writing and revising explicit programming strategies
Conference on Human Factors in Computing Systems (CHI 2021)

Maryam Arab, Jenny Liang, Yang Yoo, Amy J. Ko, Thomas D. LaToza
HowToo: A Platform for Sharing, Finding, and Using Programming Strategies
IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC2021)

Thomas D. LaToza, Maryam Arab, Dastyni Loksa, and Amy J. Ko. (2020).
Explicit programming strategies
Empirical Software Engineering (ESE), published March 2020. (impact factor: 4.5)

S lyer, Maryam Arab, Thomas D. LaToza
Stack overflow for programing strategies
Journal of Student-Scientists' Research, 2019

Maryam Arab, Tamer Nadeem
MagnoPark - Locating On-Street Parking Spaces Using Magnetometer-Based Pedestrians' Smartphones
IEEE SECON 2017: 1-9

Jing He, Dong Si, Maryam Arab.
Detection of Secondary Structures from 3D Protein Images of Medium Resolutions and its Challenges
ICIG (2) 2015: 147-155