Eslam Hussein

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Education

Virginia Tech	PhD student - Computer Science - 2018 - Present	3.85 GPA
Cairo University	Master of Science in Computer Science - 2016	
	Bachelor of Science in Computer Science – 2007	3.68 GPA

Skills

Languages: Scala, Java, Python, C/C++, C#, VB.Net, Prolog, SQL/TSQL
Frameworks/Systems: Spark, Hadoop, Scikit-Learn, NLTK, Microsoft SQL Server, MySQL, Linux, ASP.NET, LINQ, WCF, XML, Javascript, JQuery, Git, SVN, RDF, Docker, Singularity
Natural Languages: English, Arabic

Work

Advanced Research Computing (ARC) *Aug 2019 – present*
Research Assistant, responsible for developing and maintaining and deploying containerized applications on ARC clusters (Docker, Singular)

Social Computing Lab, Virginia Tech *Aug 2018 – Aug 2019*
Research Assistant, responsible for designing, executing the YouTube audit project

Qatar Computing Research Institute, Doha *Apr 2016 - Jun 2018*
Research Associate, had several responsibilities developing/maintaining/testing Arabesque and QFrag

Cairo University *Sep 2007 - Mar 2016*
Assistant Lecturer, Taught several Computer Science courses (Data Structures, Algorithms, NLP, AI, Software Engineering I and II, Artificial Intelligence)

Azhasys, Cairo *Aug 2011 - May 2012*
Software Engineer, developed a couple of projects
1. *PrevWage*: an employee payroll management module, Technologies: VB.Net, SQL Server 2008, JQuery
2. *NOSR*: an event management module

Technologies: ASP.NET, SQL Server 2008, JQuery

Infinite Software Solutions Inc (ISSI) *Nov 2010 - July 2011*
Software Engineer, developed a communication module which sends Emails, Faxes and SMSs to a list of recipients
Technologies: ASP.NET, WCF, LINQ, SQL Server 2008, JQuery, Subsonic, NUnit

Data Mining & Computer Modeling Center of Excellence, Cairo *Apr 2008 - Sep 2010*
Software Engineer, responsible for designing and developing a couple of projects
1. *Revenue Management System* (Plaza Hotel - Alexandria): A desktop application that uses machine learning to predict the revenue for the Plaza hotel

Technologies: C#, SQL Server 2005, Crystal reports
2. *Web portal* (Egyptian Ministry of Tourism): A portal that uses machine learning to forecasts the number of tourists arriving in Egypt based on historical tourists arrival statistics in Egypt

Technologies: ASP.NET, SQL Server 2005, OLAP

Projects

Arabesque is a distributed graph mining system, I had:
1. optimized the memory utilization
2. built applications on top of Arabesque
3. built and configured hadoop clusters
Technologies: Hadoop, Apache Spark, Scala, Java, Python

QFrag is a distributed graph search system
I was responsible for porting QFrag to work on top of Apache Spark instead of Giraph/Hadoop
Using: Hadoop, Apache Spark, Scala, Java

YouTube Audit: this project aims to audit the search and recommendation systems of YouTube for recommending misinformative videos (fake news, conspiracies, rumors ... etc.) to the end user. I am responsible for:

1. Experimental design of the project
2. Data collection and processing
3. Developing artificial bots that mimics the user interactions with YouTube (searching, watching videos)
4. Developing models that classifies YouTube videos utilizing features such as titles, descriptions, video statistics and users comments

Technologies: Python, Selenium, Node.js, Pandas, Matplotlib, and Scikit-learn

Publications

1. **Eslam Hussein**, Prerna Juneja, Tanushree Mitra. Measuring Misinformation in Video Search Platforms: An Audit Study on YouTube. CSCW 2020

2. **Eslam Hussein**, Ahmed Ibrahem Hafez, Aboul Ella Hassanien, Aly A Fahmy. Nature inspired algorithms for solving the community detection problem. Logic Journal of the IGPL: Oxford Journals, 2017

3. **Eslam Hussein**, Abdurrahman Ghanem, Vinicius Vitor dos Santos Dias, Carlos HC Teixeira, Ghadeer AbuOda, Marco Serafini, Georgos Siganos, Gianmarco De Francisci Morales, Ashraf Aboulnaga and Mohammed Zaki**.** Graph Data Mining with Arabesque. SIGMOD 2017 (**Honorable Mention**)

4. Fatma H. Ismail, **Eslam Hussein**, Aboul Ella Hassanien, Tai-Hoon Kim. Blog Clustering with Committee Approach. Fourth International Conference on Information Science and Industrial Applications (ISI) 2015

5. **Eslam Hussein**, Ahmed Ibrahem Hafez, Aboul Ella Hassanien, Aly A Fahmy. A Discrete Bat Algorithm for the Community Detection Problem. International Conference on Hybrid Artificial Intelligence Systems (HAIS2015)

6. **Eslam Hussein**, Ahmed Ibrahem Hafez, Aboul Ella Hassanien, Aly A Fahmy. Community Detection Algorithm Based on Artificial Fish Swarm Optimization. IEEE Conf. on Intelligent Systems 2014