Md Arafat Hossain Khan

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🗓 List of Experiences

(5 Years) ASP.NET C#, SQL Server database, JavaScript, JQuery, CSS, HTML.
Worked in Vintage IT Limited as a professional software programmer.

(10 Years) MATLAB
Did research works, published papers. Used Matlab and C programming in same application extensively.

(5 Years) Mathematica, R
Used extensively for scientific calculation, machine learning projects.

(4 Years) Data Analysis, Statistical Learning and Machine Learning
Used Python and R for numerous projects, worked with different libraries and also coding from scratch.

(2 Years) Excel VBA
Used VBA to model on ramp queue with California Department of transportation.

🎓 Education

University of Texas at Dallas	2015 – 2020
PhD, Pure Mathematics	*Research Area: Knot Theory.*
University of Texas at Dallas	May 2020
MS, Data Science	*Skills obtained: Big Data, Statistical and Machine Learning*
Bangladesh University of Engineering and Technology	2009-2013
MS, Electrical and Electronic Engineering	*Research Area: Nanotechnology.*
Bangladesh University of Engineering and Technology	2004-2009
BS, Electrical and Electronic Engineering	*Research Area: Solid State Device*

⚙ Skills

Abstract Mathematics   Knot Theory, Differential Geometry, Hyperbolic Geometry, Algebraic Geometry, Topology

Big Data   Apache Spark, Hadoop, AWS

Machine Learning   Spark MLlib in Scala, scikit-learn in Python

Statistical Learning   Parametric and non-parametric, linear and non-linear methods, hypothesis testing

Programming Languages   Assembly, C, C++, C#, Java, Visual Basic, Python, Scala

Web Developing   ASP.NET, HTML, CSS, JavaScript, JQuery, XML

Mobile Application   Android application using eclipse and Mono for Android

Database   NoSQL, MongoDB, SQL Server, MySQL, SQLite

Technical Programming   Verilog, VHDL, MATLAB, R, LABVIEW

Simulation Software   Cadence Virtuoso, HSpice, PSpice, Quartus II, AVR Studio, Proteus, VISSIM, Synchro, Vistro

🗄 Funded Research Projects

Caltrans-Queue Storage and Acceleration Lane Length Design at Metered On-Ramps in California
Graduate Research Assistant, University of Nevada, Reno

> Role: Research Assistant.

- Duration: March 2013 to February 2015
- Project Goal: Developing guidelines for practicing transportation engineers.
- Location: California Department of Transportation
- Total Cost: USD 249,310
- Funding Agency: Department of Transportation (Caltrans)

Reengineering of the Information Technology Research and Resource Center (ITRRC)
Associate Researcher, Jagannath University

- Role: Project Leader.
- Duration: May 2010 to Dec 2013
- Project Goal: Developing an advanced IT research infrastructure for present and future studies.
- Location: Jagannath University, Dhaka, Bangladesh
- Total Cost: USD 236,714
- Funding Agency: World Bank and Bangladesh Government

🔧 Work Experience

Graduate Teaching Assistant   Sept. 2015 to Present
Department of Mathematical Sciences   *University of Texas at Dallas*

Graduate Research Assistant   Sept. 2013 to Sept. 2015
Department of Civil and Environmental Engineering   *University of Nevada-Reno*

Assistant Professor   Jan 4, 2014 to Present
Department of Computer Science and Engineering   *Jagannath University (On-Leave)*

Lecturer   May 2, 2011 to Jan. 4, 2014
Department of Computer Science and Engineering   *Jagannath University (On-Leave)*

Lecturer   Dec. 2009 to May 2011
Department of Electronics and Telecommunication Engineering   *The People's University of Bangladesh*

Leading Software Engineer (Part-Time)   June, 2004 to Dec. 2009
Project Management Division   *Vintage IT Limited, Dhaka*