ATIKUR RAHMAN

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RESEARCHER/ DATA SCIENTIST/ DATA ANALYST

Dedicated Data Scientist with about 2 years of hands-on experience designing and implementing predictive and statistical studies using R Statistical, along with machine learning algorithms, collecting, analyzing, processing, and visualizing complex data sets containing large amounts of data, resulting in solid information which guides key decision-making process. Skilled in using technologies such as Python, R, SPSS, ArcGIS, SQL, Hadoop, Hive, Pig, and Jupyter Notebook.

Data Science • Machine Learning • Predictive Models • Object-Oriented Java Programming
Data Validation • Data Analysis • Database Implementation • Statistical Analysis and Methods

Languages: R, Python, Java, SQL
Web: HTML5, CSS3, JavaScript, XML, AJAX, JUnit, Bootstrap, jQuery
Web Services: REST, SOAP, JSON
Frameworks: Spring Boot, NetBeans, Android Studio, R Studio, IBM SPSS, ArcGIS, StarUML, Eclipse, Tableau
Databases: MS SQL, SQLite
Design Patterns: MVC, Singleton, Prototype, Session, Session Factory, Observer
SDLC: Agile/Scrum, Waterfall
Platforms: Windows, Mac OS, Jupyter Notebook, Cloudera
Machine Learning Algorithms: Generalized Linear Models, Logistic Regression, Naïve Bayes, SVM, Decision Tree, Random Forest, K-Means, KNN, ANN

PROFESSIONAL EXPERIENCE

CAREER NOTE: Currently pursuing **Master's Degree in Computer Science.** Authorized to work as a full-time, W-2 employment for any employer. Wiling to relocate anywhere in the USA.

RESEARCH CENTER FOR URBAN SAFETY AND SECURITY (RCUSS), KOBE UNIVERSITY, Kobe, Japan • 2022
Public university.

Researcher
Research theme: *Household evacuation preparation time during a cyclone: Random Forest algorithm and variable degree analysis.*

- Predict households' evacuation preparation time simulation based on Random Forest Algorithm.
- Designed cyclone evacuation timeline with Microsoft Office.
- Gathered primary data through field survey using face-to-face interviews and ArcGIS.
- Prepared and analyzed primary data using Microsoft Office and IBM SPSS.
- Predict importance of variables using Gini Index method.
- Analyze relationship between variables using Partial Dependence Plot (PDP).

Technologies Used: *R Statistical, R Studio, IBM SPSS, Machine Learning Model*

KOBE UNIVERSITY, Kobe, Japan ● 2021-2022
Public university.

Graduate Research Assistant
Research theme: *A Study on Prediction of Evacuation Preparation Time Based on Factors Affecting Households' Evacuation Decision in Response to Cyclone in Bangladesh.*

- Investigated factors associated with households' safe and complete evacuation towards shelter during a cyclone.
- Designed cyclone evacuation timeline with Microsoft Office.
- Gathered primary data through field survey through face-to-face interviews and ArcGIS.
- Prepared and analyzed primary data using Microsoft Office and IBM SPSS.
- Coded modules and algorithms to deepen data analysis using R Statistical through R Studio software.

Technologies Used: *R Statistical, R Studio, IBM SPSS, ArcGIS*

ACADEMIC PROJECTS

Maharishi International University, Fairfield, Iowa (2023):

- **Library Management System:** Created a class diagram showing attributes, operations, associations, and inheritance relationships, as well as sequence diagrams modeling multiple use cases through StarUML. Designed and implemented user interface which supports library management functionality. Used Java code and Eclipse to design user interface.

- **Change Detector Service:** Design a software system that allows participation of data, analysis of data, and generating analysis report. The participation of data in the system is both generating data and taking data from external sources. The specific service is changing detector data, where the service checks if there was a change in any two subsequent values of a data that is published in the stream. Take the input data through the Kafka producer and consumer. So, uses microservices Spring Cloud and Netflix OSS, Netflix Eureka for service discovery, Spring Cloud Config Server for central configurations, Git for repositories, Maven for building dependencies, and build and deploy in Docker.

- **Weather Information Data Management:** Retrieved streamed weather information from OpenWeather API using Kafka producer and consumer. Performed analytic operations on RDD list through Spark and created weather data table in Cloudera environment. Connected Cloudera with Tableau to visualize final weather data.

Daffodil International University, Dhaka, Bangladesh (2015):

- **Designed and developed a mobile application of Doctors' Information:** Established database server using SQLite based on doctors' data as a publicly available source of hospital and doctor information. Performed feasibility study and unit testing as a SDLC requirements. Conducted use case design with StarUML. In addition, designed and created user interfaces and implemented the code using Java in Eclipse. Use Android Studio as a platform to launch the application.

EDUCATION

Master of Science in Computer Science
(In progress via distance education; expected completion April 2025)
Maharishi International University – Fairfield, Iowa

Key Courses: *Fundamental Programming Practices; Modern Programming Practices; Database Management Systems; Big Data Technology; Algorithms; Software Architecture*

Doctor of Engineering in Architecture (2022)
Kobe University – Kobe, Japan

Master of Science & Engineering in Geoscience (2019)
Shimane University – Matsue, Japan

Bachelor of Science in Computer Science & Engineering (2015)
Daffodil International University – Dhaka, Bangladesh

PUBLICATION

Chakma, S., HOKUGO, A., and Rahman, M. A. (2022) Factors Affecting the Cyclone Preparedness Programme Volunteers' Performance in Early Warning Dissemination in Emergency Response in Bangladesh. IDRiM Journal, 12 (2). https://doi.org/10.5595/001c.38750

M. A. Rahman, A. Hokugo, and N. Ohtsu, "Household evacuation preparation time during a cyclone: Random Forest algorithm and variable degree analysis," Prog. Disaster Sci., vol. 12, p. 100209, 2021; https://doi.org/10.1016/j.pdisas.2021.100209

Rahman, M. A., HOKUGO, A., OHTSU, N., and Chakma, S. (2021) Evacuation preparation scenarios of households during early and emergency evacuation: A case study of Cyclone Bulbul in Southwestern Coastal Bangladesh. IDRiM Journal, 11 (2). https://doi.org/10.5595/001c.291