Muhammad Moeen Ud Din

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Profile

Senior Software Engineer, Data Specialist, and Researcher with over a decade of experience in backend development, data engineering, and NLP. Proficient in designing and deploying scalable, cloud-based solutions on Azure, I lead high-impact projects and have contributed to the field through published research, MS thesis mentorship, and development of data-driven products. Recognized for delivering quality solutions in AI, data science, and full-stack development.

Skills

Dot Net Core/WCF, Python, Php, Java and Angular

Azure Databricks, SQL Database, Azure Synapse, and Azure Blob storage

Education

Lahore University of Management Sciences, MS in Computer Science — Aug 2009 – May 2012
- GPA: 3.03/4.0
- **Coursework:** Advance Topics in Data mining - Grade A, Intelligent Computing

National University of Computer and Emerging Sciences, BS in Computer Science — Aug 2001 – May 2005
- GPA: 2.89/4.0 (Awarded 50% need-cum-merit scholarship)
- **Coursework:** Artificial Intelligence

Experience

Visiting Lecturer, ITU – Lahore, PK — Aug 2024 – Jan 2025
- Teaching Web Design and Development to 120 students divided in two sections
- Teaching method to lower the barriers for achievements to bring learning motivation up
- Evaluations on learning behaviors and practical attempts

Senior Software Engineer, Discourse Analytics – Islamabad, PK — Sept 2015 – Jan 2024
- **WCF base Polling web services** and application, by using independent RuleEngine
- **Codedom based RuleEngine**, generating N-tree logic structure for defining the Poll serving logic
- **Recommendation engine CRUD and profile match score** or match calculations integrated with polling application
- Independent Polling application use Azure Queue to send the event data
- Integration with Microsoft Teams Polling Widget by building Wrapper API's dot net core
- Designing and implementing smart pod application for MS Teams, implementing a dynamic groups selected on the basis of personality profiles, allocating each group a leader.
- Managing and grouping data signals for Brain developed, behavioral signals - attitudes, and target specific personality dimensions in domain of Education, Health and Mortgage
- Wrote backend for Digital Counselar App on Alexa skills: **Visit Alexa Skill**
- Wrote data extraction queries for Canvas, Blackboard and standardized them for default package
- wrote python data extraction scripts, statistical analysis, data report automation and report to customer success manager
- Azure DevOps for build management, CI/CD, backups, versioning, packaging python artefact, nugets and internal python libraries
- **Trained and supervised a team** of 2 data engineers, and 2 Data Quality assurance engineers
- Data ETL for **Salesforce, Canvas, D2L and Blackboard**

- Lead a team for designing predictive machine learning model
- Domains: EduTech, Mortgage-Finance, Health and Domestic abuse

Research Associate, Data Science Lab, ITU – Lahore, PK   Aug 2014 – Sept 2015
- Research work on topical movements on twitter datasets, Roman Urdu Dictionary hybrid app, credited for Mentoring MS Thesis student

Software Engineer, iOS, Matrix Sourcing – Lahore, PK   Oct 2011 – Aug 2014
- Designed an iOS for iPad for merchandiser to report product quality in assembly line
- API for iOS app in Php

Research Coordinator, Polyvista – Lahore, PK   Mar 2012 – May 2012
- On Twitter profile classification task, suggested tweaks to improve accuracy.
- Coordinated between the Development team and Technical Consultants only 10-15 hours per week.

Junior Php Developer, Polyvista – Lahore, PK   Sept 2008 – April 2009
- Knowledge base CMS developed in Codeigniter and Jquery
- Tool Quality Management module developed

Web Master, Center for Urdu language processing – Lahore, PK   Feb 2008 – Aug 2008
- Maintained PANL10 project websites.
- Deployed open source paper submission system.
- Proofreading an Urdu book manuscript.

Business Analyst, Reet Readymade Garment – Lahore, PK   Nov 2006 – Jan 2008
- Performed requirement analysis on the garment/order pipeline to make it transparent to client.
- Took effective steps to pipeline and analyze real time order processing and reporting on end of day.

Internship, DecodeIT – Lahore, PK   Feb 2006 – May 2006
- Build a crawler in php to scrape data from a web portal and save records in Mysql database.
- Created an Admin panel to maintain Address and contact information for a client

Publications

An Unsupervised Method for Discovering Lexical Variations in Roman Urdu Informal Text.   Sept 2015

Abdul Rafae, Abdul Qayyum, *Muhammad Moeen Uddin*, Asim Karim, Hassan Sajjad, and Faisal Kamiran.

In: Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP). Lisbon, Portugal

Understanding Types of Users on Twitter   May 2014

Mohammad Moeen Uddin, Mohammad Imran, and Hassan Sajjad.

In: Proceedings of the 6th ASE International Conference in Social Computing (SocialCom). Stanford, USA

Personalized versus non-personalized tag recommendation: A suitability study on three social networks,   Sept 2011

M. M. Uddin, M. T. Hassan, and A. Karim.

IEEE 14th International Multitopic Conference, Karachi, Pakistan, 2011, pp. 56-61.

Technical Report on Tensor based Personalized Tag Recommendation   Sept 2011

Muhammad Moeen Uddin, Supervisor: Prof. Asim Karim

Projects

Simple RAG on UK court procceedings dataset   July 2024 - Sept 2024
- UK court proceedings dataset utilizing Gen AI capabilities with RAG implementation on Azure stack
- Tools Used: Python

- Demo

FirstDraftScore: Measuring quality of creative content based on the seed directions 2022 - onwards

- In a blog creating, each iteration of content is saved, and processed until a final draft is ready, Model that infer quality score of first draft ready to publish.
- Tools Used: Python

Behavioral signals extraction and mapping 2018 - 2024

- Data analysis of about 30 universities data for signal extraction and ingestion automation
- Tools Used: Python, Azure Functions

Churn Prediction Data modeling 2023 - 24

- Accurately reproduced a student's churn prediction model by analyzing their dataset, understanding complex business rules, and establishing a robust base data model, ensuring alignment with client objectives and predictive accuracy.
- Tools Used: Python, Notebook
- Demo at discourseanalytics.com

Survey Application with rule engine 2015 - 2018

- Impact: 15 percent more queries and 5 percent more recurring sign ups
- Tools Used: C#, Angularjs

Topical trend analysis on Twitter data 2014

- Topic clustering with sentiment analysis on 20 keywords based dataset - overall 2 million tweets.
- Tools Used: Java

Certifications / Trainings

Machine learning specialization Stanford/Deeplearning.ai	Jan 2025
Certified Business analysis professional	Jan 2013
Certificate Training Redhat, PHP, MYSQL, Apache	Aug 2005
Web development IEEE NUCES Chapter	Jan 2003

References

Dr. Asim Karim, Professor, Dept of Computer Sc. Lahore University of Management Science, Lahore, Pakistan. akarim@lums.edu.pk

Dr. Hassan Sajjad, Associate Professor, Faculty of Computer science, Dalhousie University, Halifax, Canada. hsajjad@dal.ca