

Mir Abdullah AlMasud

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Summary

Experienced Senior Software Engineer with a robust background in scientific computing, engineer consultancy and software engineering, now equipped with an advanced degree in Data Science. Proven track record in developing and managing distributed, scalable applications, leading big data migration projects, and delivering data-driven insights. Seeking to leverage my expertise in data analytics, machine learning, and financial analysis to contribute to strategic decision-making.

Professional Experience

International Technegroup Inc.

Senior Software Engineer(CAD/PLM)

February 2022 - Present

Milford, OH

- Provided professional consultancy service for large scale CAD/PLM data migration to clients including Baker Hughes, Caterpillar, Johnson Electric and others.
- Developed data-driven solutions to generate actionable insights.
- Managed data conversion and ETL processes across Solidworks, ePDM, Teamcenter, and Windchill on both on-premises and Azure cloud servers.
- Designed and implemented end-to-end solutions from concept to production within budget and time limit maintaining quality exceeding expectation.

Beck Research Lab at University of Kentucky

Data Science Research Associate

January 2022 - December 2023

Lexington, Kentucky

- Developed algorithms to identify maximum stress paths to predict failure shapes in computational models.
- Developed toolkit using multiple open-source software components including Salome-mecha, gmsh and code-aster to simulate complex interlayer grain geometry solids under different loading conditions. Used reduced order methods for Finite Element Analysis and developed predictive analytics models using appropriate machine learning algorithms including Linear Regression, Decision Tree, Random Forest and other state-of-the-art techniques. Success of this project secured a DOE grant to support further research for two future PhD students.

Siemens Digital Industries Inc.

Senior Software Engineer

April 2013 - February 2022

Milford, OH

- Developed and maintained NX-Nastran finite element software in an agile environment.
- Enhanced performance through statistical analysis of finite element models, and by implementing shared and distributed memory solutions.
- Managed big data and distributed systems using AMQP architecture.
- Mentored junior team members and interns.

Education

M.S. in Data Science

University of Kentucky

2022 - 2023

M.S. in Engineering (Mechanical)

Louisiana Tech University

2010 - 2013

B.S. in Mechanical Engineering

Bangladesh University of Engineering and Technology

2004-2009

Academic Projects

- Capstone: Developed a web platform to facilitate tuning of Large Language Model Performance
- Data Mining Project: Solving Data Imbalance in Bank Telemarketing Data
- SAS Programming Project: Survival Analysis of Arthritis Data using SAS,
- Streaming Data Processing: Created a framework for a live dashboard using real time covid-19 patient data.
- ML Project: Emotion classification using state-of-the-art shallow and deep machine learning techniques.

Awards

Siemens - YouAnswered in 2022

North American Society of Trenchless Technology - Best research presentation award 2012,2013

Technical Skills

- 10+ years experience in Python development
- Experience in Machine Learning in multiple language and platformsData Analytics: R, SAS, pandas, numpy, matplotlib, plotly, chart.js
- Parallel Programming: Intel MPI, Python multiprocessing/threading libraries
- Machine Learning: scikit-learn, imbalance-learn, keras, pytorch, FAISS

Additional Information

- Strong problem-solving abilities with a passion for physics and mathematics.
- Extensive experience in data analysis, including engineering, wrangling, modeling, and storytelling.
- Expertise in predictive modeling, machine learning, deep learning-based forecasting, and building data-intensive applications on OpenStack and Azure VMs.
- Proficient in working with global teams across various time zones.
- Authorized to work for any US employer (US Citizen).