

**Mir Al-Masud**

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<https://github.com/almasudme>

Work Authorization: Permanent Resident (US Green Card).

**Experience**

**February 2022 -Present : International TechneGroup Inc. ,Milford,OH**

**Senior Software Engineer & Project Lead (PLM Data Migration)**

- Establish PLM and CAD data migration plan
- Lead development projects and testing of migration scripts
- Data conversion, ETL of data from source into Target environment.

**January 2022 -Present : Research Computing - Beck Research Group**

**University of Kentucky College of Engineering**

- atomistic and multi-scale quantum mechanical calculations of structure-property relationships,
- surfaces, interlayer grain geometry development in Computational Material Science
- Predictive analytics and AI powered Material science
- KRaSTK opensource tool development.  
[<https://github.com/Computational-Materials-Science-UK/KRaSTk>]

**April 2013 - December 2021 : Siemens Industry Software,Milford,OH**

**Senior Software Engineer (Simcenter 3D,FE Solver support )**

- Develop and maintain backend system services - distributed systems, real time web applications for visualization and tracking performance metrics, database etc for FE solver support (Nastran and Samcef).
- Mentor newer team members, intern/co-op students and manage tools enhancement projects.
- Facilitate, automate, and maintain the execution environment for Finite Element solution to Problems that requires Serial, Shared and Distributed memory environments.

**December 2010 - February 2013: Louisiana Tech University,Ruston, LA**

**Graduate Research Assistant in Department of Mechanical Engineering**

- Ansys Parametric Design Language scripting to parameterize and automate FE simulations.
- 3D solid modeling using CAD software.
- Analyzing, data wrangling and preparing reports based on research findings.

**Education**

**Currently enrolled in Masters in Data Science in University of Kentcky**

Starting from Spring 2022

**September 2010- May 2013**

Louisiana Tech University, Ruston,LA- MS in Engineering (Mechanical)

**March 2004- May 2009**

Bangladesh Univ of Engg. and Tech , Dhaka,Bangladesh- **BS** in Mech. Engineering.

### **Technical Skills**

- Computational Geometry: openGL,openCV,VTK,CGAL.
- Programming Expertise: in Python, C, and C++.
- Build Management Tools: GNU Make, and Microsoft Visual Studio, Intel oneAPI toolkit (HPC), and developing appropriate wrapper tools.
- Root cause analysis of performance and regression on solution sequences of nastran simulations.
- Expertise of Distributed and Shared Memory Parallel programming using Intel MPI and Python multiprocessing/threading libraries.
- Detailed understanding of Linux and Windows operating systems.
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- Full Stack Software Development with Python and Perl with HTML,PHP, JavaScript, Bootstrap on frontend, SQL,Redis,JSON,XML,CSV as data store.
- Scripting in perl, bash,sed awk and batch commands in windows.
- Managing task queue in a distributed system using Celery API and RabbitMQ as message broker.
- Understanding of network/file transfer protocols like udp,tcp,ssh,rdp,ftp,scp etc.
- Developing wrapper tools around version control systems like Clearcase, Perforce, Git.
- Familiarity with Big Data programming platforms and tools like Hadoop, Mapreduce, Apache Spark.
- Expertise in Data Analysis and Visualization using pandas,numpy,matplotlib, plotly, chart.js etc.
- Desktop GUI development using Qt, TCL/Tk.
- Microsoft Office applications.

### **Other Skills**

- Quick Learning ability of new languages,tools and environments.
- Ability to manage multiple tasks with minimal supervision.
- Problem solving skills in Physics and Mathematics.
- Leading a small team of interns and developers.

### **Awards**

Received Siemens YouAnswered Award in 2021

### **Workshops and Specializations**

- Google Project Management,Deep Learning Specialization in Coursera,