Mir Al-Masud

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https://github.com/almasudme
Work Authorization: US Citizen
Lives in : Auburndale,FL

Experience

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

Senior Software Engineer & Project Lead (PLM Data Migration)

- Establish PLM and CAD data migration plan (Solidworks, Teamcenter, Windchill)
- 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 and 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.

Education

- **January 2022 (ongoing) MS in Data Science**
  University of Kentcky , Lexington,KY

- **September 2010- May 2013 MS in Engineering (Mechanical).**
  Louisiana Tech University, Ruston,LA
  Research Concentration: Development and implementation of Finite Element Methods

- **March 2004- May 2009 BS in Mechanical Engineering**
  Bangladesh University of Engineering and Technology, Dhaka, Bangladesh,

Technical Skills

- Full Stack Software Development
  - Language:Python and Perl
  - FrontEnd: HTML, JavaScript, Bootstrap
  - BackEnd: php, django,flask
  - Data: SQLite,Redis,MongoDB,JSON, XML, and CSV.
- Statistics and Data Scinece:
  - health data and sports data analytics using R and SAS
  - ML Libraries: scikit-learn, imbalanced-learn,Tensorflow, Keras
  - Familiar with programming platforms to analyse healthcare data and tools like Hadoop, Mapreduce, and Apache Spark.
  - Expertise in Data Analysis and Visualization using pandas,numpy,matplotlib, plotly, chart.js etc.
  - Root cause analysis of performance and regression on solution sequences of nastran simulations.
- Distributed systems , Parallel computing and High Performance Computing
  - Expertise of Distributed and Shared Memory Parallel programming using Intel MPI and Python multiprocessing/threading libraries.
  - Managing task queues in a distributed system using Celery API and RabbitMQ as message broker.
- Software Systems and Build Tools:
  - Build Management Tools: GNU Make, and Microsoft Visual Studio, Intel oneAPI toolkit (HPC), and developing appropriate wrapper tools.
  - Developing wrapper tools around version control systems like Clearcase, Perforce, Git,Mercurial.
  - Scripting in perl, bash,sed awk and batch commands in windows.
- PLM system
  - Expertise in developing solutions for export, transform, and load Solidworks, Windchill, and Teamcenter data using ITI's proprietary data migration toolkit.
  - 8+ years experience in developing and delivering FE solver and CAD tools for Teamcenter
- Understanding of network/file transfer protocols like udp,tcp,ssh,rdp,ftp,scp etc.
- Computational Geometry: openGL,openCV,VTK,CGAL
- Scientific Computing: Python and C, intel MKL
- Desktop GUI development using Qt, TCL/Tk.
- Microsoft Office applications.

Other Skills

- Leading and managing projects, maintaining the scope and deadlines basedon customer interaction
- Permorms the role of a common contact point between development team and customer
- Ability to manage and supervise multiple tasks.
- Leading a small team of interns and developers.
- Problem solving skills in Physics and Mathematics.

Awards

Siemens YouAnswered Award in 2021.