Mohsin Khan Kamal Nadim

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SUMMARY OF QUALIFICATION:

- Experienced and Published Researcher specializing in Laser-Based Metal Additive Manufacturing.
- Knowledgeable on the application of Machine learning and Digital Twin for Metal Additive Manufacturing and worked on the research and development of a new metal additive manufacturing system with in-situ detection to monitor process variables by integration of sensor systems for data acquisition and analysis.
- Extensive hands-on experience in independently operating Direct Metal Deposition (DMD) machines for near-net shape part fabrication, monitoring process parameters, testing and characterization of fabricated parts, analyzing relationship between process parameters and properties of final part as well as optimizing process parameters and predicting properties using various techniques.
- Known for an independent, responsible, and structured work ethic, combined with a cross-thematic fascination for technology with good knowledge of programming and a proactive approach to learning new skills.

WORK HISTORY:

Centre for Additive & Special Manufacturing Processes, CMTI, Ministry of Heavy Industries – Bengaluru, India
Project Fellow – Sept 2022 to Jun 2023
Internship – Sept 2021 to Apr 2022

- Actively reviewed information on modeling, simulation, machine learning and digital twin for metal additive manufacturing, focusing on system integration and optimization.
- Fully involved in the 70 million rupees worth R&D project - Developing a new laser deposition welding-based additive manufacturing system with in-situ detection.
- Independently handled all the stages of Metal additive manufacturing, from operating Direct Metal Deposition (DMD) machines and monitoring the process parameters to optimizing the process parameters based on the required properties of the final part.
- Engaged in application-oriented projects on near-net shape part fabrication, multi-materials, cladding and remanufacturing. Modeled end products and simulated tool paths using CAM software.

PUBLICATION:

Mohsin Khan, K., Rao, T. B., Manjunath, B. N., Abhinav, K., Vinod, A. R., and Mohammed, R. (May 23, 2023). "Studies on the Effect of Substrate Preheating, Interlayer Dwell, and Heat Treatment on Microstructure, Residual Stress, and Mechanical Properties of IN625 Superalloy Built by Direct Metal Deposition." ASME. *J. Eng. Mater. Technol*. October 2023; 145(4): 041004. https://doi.org/10.1115/1.4062503

CERTIFICATION:

Oracle Cloud Infrastructure 2023 AI Certified Foundations Associate
Google Data Analytics Professional Certificate
Machine Learning Specialization by DeepLearning.AI and Stanford University - Coursera
MACHINE LEARNING APPLIED TO MANUFACTURING PROCESSING - Udemy
HANDS-ON WORKSHOP ON INTRODUCTION TO ADDITIVE MANUFACTURING - ANSYS
THE FUTURE OF MANUFACTURING BUSINESS - ROLE OF DIGITAL TECHNOLOGIES - NPTEL, India
KAIZEN ROBOTICS PROGRAM at Lema labs, India

EDUCATION:

Friedrich-Alexander-Universität Erlangen-Nürnberg - Erlangen, Germany
MSc Electromobility ACES - Oct 2023 to present
Specialization: AI & Autonomous driving and E-powertrain

National Institute of Technology Andhra Pradesh - Tadepalligudem, India
MTech Mechanical Engineering - Aug 2020 to Jun 2022
Specialization: Manufacturing Engineering

Anna University - Chennai, India
BE Mechanical Engineering - Aug 2015 to Apr 2019

PERSONAL MACHINE LEARNING PROJECTS:

Supervised learning (Classification) using MAGIC dataset
Supervised learning (Regression) using Bikes dataset
Unsupervised learning using Seeds/wheat dataset

SKILLS:

Python, DMDCAM, SOLIDWORKS, AutoCAD, Microsoft Office, R (basics), Tableau (basics)

LANGUAGES:

English (fluent), German (Level: A2), Tamil (native), Urdu (fluent), Hindi (good), Arabic (fair)