Aditya Yadav

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Education

Electrical & Electronics Engineer (B.E) August 2016 – September 2020
Lakshmi Narain College of Technology (L.N.C.T)
R.G.P.V, Bhopal

Experience

C.S.I.R- Advanced Materials & Processes Research Institute [A.M.P.R.I] Bhopal, M.P

Project Associate-II January 2023 – March 2025

- Expertise in DMP-FLEX-350, 3DXpert, GE Arcam A2X for additive manufacturing workflows.
- Handling and operation of metal additive manufacturing systems, ensuring quality standards.
- Trained 5+ team members in LPBF systems and process optimization, improving operational efficiency.
- Specializing in Laser Powder Bed Fusion (LPBF) and Electron Beam Melting (EBM) technologies.
- Successfully printed materials like SS316L, AlSi10Mg & Ti6Al4V.
- Optimizing process parameters for improved yield & density for AlSi10Mg.
- Conducted metallographic analysis of 3D-printed AlSi10Mg, including Williamson-Hall analysis, porosity evaluation Micro-CT and grain structure examination.

M-cube 3D Bhopal, M.P

Intern October 2020 – October,2022

- Designed and developed electronics for FDM polymer-based 3D printers.
- Troubleshot and optimized IoT-based monitoring systems for industrial applications.
- Managed operational tasks, streamlining processes for increased efficiency.
- Assisted in hardware-software integration to improve machine performance.

Skills & Certifications

- **Certifications:** Harvard CS50: Artificial Intelligence, Harvard CS50: Python, 3DXpert & DMP FLEX 350 Operations
- **Technical:** Computer Vision, OpenCV Face, Detection, OpenCV Object Detection, Pose Estimation (OpenPose), OpenCV Object Tracking, Image Processing**,** Deep Learning: CNNs, RNNs, Perceptron, Support Vector Machines (SVM), Attention Mechanism, BERT, TensorFlow, Supervised & Unsupervised Learning, Neural Networks, Reinforcement Learning, Transformers, Data Science & Analysis: NumPy, Pandas, SciKit-Learn, Matplotlib, NLP Techniques: NLTK, Word2Vec, N-Grams, Text Classification, Additive Manufacturing (LPBF, EBM, FDM)
- **Programming Languages:** C, C++, Python, C#, HTML
- **Engineering & Tools:** 3DXpert, SolidWorks, Origin, Fiji

Projects & Research

- **Am I Cooked?** – Heart Disease Predictor (Python, Scikit-learn, Flask, HTML/CSS, Pandas)
- **Statue of 3-LIES** (Python Trivia Game Referencing all Harvard University history.
- Traffic Signal Classification using CNNs (Built a deep learning model using Convolutional Neural Networks (CNNs) to classify traffic signals)
- Attention-Based Text Classification using BERT (Implemented BERT-based attention mechanisms for text classification tasks)
- Neural Network Number Recognition (Built a Pygame-based tool where users can draw any number, and the model predicts it using a Neural Network.
- Minesweeper AI (Built an AI using that logically deduces mine locations using constraint satisfaction.
- Tic-Tac-Toe AI (Minimax & Alpha-Beta Pruning)

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