Priyabrat Mishra

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Professional Summary

M.Sc. graduate with AI specialization from the University of Freiburg, Germany, with 4+ years of software development experience. Currently, a Graduate Research Assistant at Fraunhofer IWM, leveraging AI and software development to address applied research challenges in material science. Looking forward to applying data driven software solutions to solve industrial challenges.

Experience

Graduate Student Research Assistant
Jul 2022 – Present

Fraunhofer Institute for Mechanics of Materials IWM　　　　　　　　　　　*Freiburg, Germany*

- Collaborating with cross-functional teams to automate a manual material testing process using deep learning.
- Prepared a custom image-based dataset for a computer vision project by implementing image processing, data annotation, and data augmentation techniques while adhering to FAIR principles.
- Contributed to wrapper development with the Material Informatics team to integrate data from partner simulations and databases for analysis and visualization.
- Supported the lead research scientist in developing automated tests, enhancing the Python-based SDK for an in-house data platform.

Assistant Systems Engineer
Mar 2018 – Apr 2019

Tata Consultancy Services　　　　　　　　　　　　　　　　　　　　　　*Pune, India*

- Worked with different teams to create a data pipeline, which reduced projects's storage needs by 20%.
- Managed data maintenance tasks—including cleaning and verification—from multiple sources, leading to a 10% reduction in data processing time.
- Facilitated the adoption of Agile methodologies by utilizing Jira & Confluence, leading to improved productivity.
- Implemented software documentation using open-source python tools for internal team developers .

Software Development Intern
Jan 2017 – Apr 2017

BNY Mellon Technologies　　　　　　　　　　　　　　　　　　　　　　　*Pune, India*

- Provided software support on financial projects using IBM mainframes to three mainframe developers and one project manager.
- Developed a batch processing ATM system on IBM mainframes as part of final internship evaluation.

Technical Skills

Languages: Python, HTML, CSS
ML libraries / frameworks: PyTorch, PyTorch-lightning, OpenCV, Numpy, Pandas, Scikit-Learn, Matplotlib, Pillow
Software Development : Pydantic, Pytest, FastAPI
Project Management and Workflow Tools: JIRA, Kanban Board, OpenProject
Dev tools and Environments : Linux, Jupyter, Sphinx, Readthedoc, Anaconda, virtualenv
Concepts: Artificial Intelligence (AI), Deep Learning (DL), Machine Learning (ML), Computer Vision (CV), Software Development (SDE), API based development, Software testing, Version control system (VCS), Agile Methodology

Education

University of Freiburg
2019 - 2024

Master of Science : Embedded Systems Engineering (AI Specialisation)　　　　*Freiburg, Germany*

Institute of Technical Education and Research
2013 - 2017

Bachelor of Technology : Electronics and Communication Engineering　　　　*Bhubaneswar, India*