Garima Mahato
Lead Engineer,
Samsung Electro-mechanics Software India Private Limited
LinkedIn , GitHub, Portfolio

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Expert in understanding problems and designing solutions. Have 7+ experience in developing AI solutions for healthcare and manufacturing domain. With 2+ years experience in leading projects, the last project was a massive success resulting in ROI>100%.

Education

2012-16	BIT Sindri, Dhanbad Bachelor of Technology, Information Technology	(CGPA)8.42/10
2012	12th (Indian School Certificate Examination) Council for Indian School of Certificate Examination	90.5%
2010	10th (Indian Council for Secondary Examination) Council for Indian School of Certificate Examination	89.57%

Experience

Dec'16 - Present

Samsung Electro-mechanics Software India Private Limited

- Role: Lead Engineer
- Designed and developed AI solutions for manufacturing domain
- 2+ years experience in building and leading teams

Dec'16 - Dec'19

TATA Consultancy Services

- Role: Systems Engineer
- Developed end-to-end solutions for healthcare domain in Python using Machine Learning, Deep Learning, Computer Vision and Image Processing, Natural Language Processing concepts
- Working experience in Agile/Scrum development environment with frequently changing requirements.
- Delivered projects with 100% customer satisfaction

Workshops & Trainings

Feb 2024	Completed **Extensive and Reimagined AI** Program for 2024 by **The School of AI**
Jan 2021	Completed **Extensive Vision AI 4** Program for 2020(Phase 1 and 2) by **The School of AI**
Nov 2019	Completed online training on "Machine Learning by Stanford University" on Coursera
April 2019	Completed online training on "**Deep Learning A-Z**"
	Completed online training on "**NLP: Natural Language Processing**"
Nov - Dec'15	Successfully underwent online training on **Image Processing-SimpleCV** conducted by Internshala with **90%** score
Aug'14 - Feb'15	Successfully underwent online training in **Python** conducted by Internshala with **100%** score
	Successfully underwent online training in **Web Development(HTML, CSS, PHP, MySQL)** conducted by Internshala with **90%** score
	Successfully underwent online training in **Core Java** conducted by Internshala with **90%** score
Jun-Jul'14	Underwent IBM Career Education program on J2EEwhere I learnt J2EE,JS,DB2,SDLC using various IBM software like Rose 2000,Websphere and developed a project on Online National Polling System.

Projects

Jan 2024 - Dec 2024

Defect Detection and Auto-Labelling

- Designed and implemented an AI solution to detect defects and auto-label with above human accuracy and minimum time.
- Anomaly detection was used to segregate defective products and then segmentation was used for labeling defects. Auto-clustering was used to create defect labels.

Jul 2021 - Dec 2023

MLCC Machine Parameter Optimization

- Designed and implemented an AI solution to optimize machine parameters which results in the minimum defects which was deployed in > 10 machines and return on investment>100%
- The solution involved implementing a trained loss function for optimizing a hybrid model.

Feb 2020 – June 2021

Unified AI Platform

- A data preparation & modelling tool for Machine Learning and Deep Learning tasks to automate data preprocessing processes and generate standard datasets.
- Role: Backend developer to develop core functionalities of data preprocessing, visualization and modelling.

Feb 2019 – May 2019

Predicting Cancer Cell Ablation Procedure details

- Implemented an ML based model to predict ablation requirements of cancer patient and volume that needs to be ablated. The model takes patient details as input and predicts number of probes, power and time for those probes. “MultiOutputClassifier” was used to predict the number of probes and “Regression” was used to predict power and time for those probes with 86 % accuracy.
- Created a python module to read the RTSTRUCT file and generate a 3D view of the lesion volume using Plotly along with its calculated volume in cubic millimetre.
- Created a flask API to serve the created model for consumption by web app.
- A web application was created in ReactJS to provide an interface for taking inputs and generating results using the API.
- Used Image Processing techniques for visualising RTSTRUCT files, and Machine Learning techniques to create and train models
- Used Azure Databricks with MLFlow for data analysis, model creation, versioning and model serving.
- Language – Python, Libraries – Scikit-learn, Plotly

Technical Skills

Languages	*Proficient in*: Python, JAVA	
Web	*Proficient in*: HTML, CSS, JavaScript	*Beginner in*: ReactJS
Database	*Proficient in*: SQL	*Beginner in*: MongoDB
Frameworks	*Proficient in*: Flask, Keras, Scikit-Learn, Numpy, Pandas,Pytorch	

Achievements

2022	Unified AI Platform was awarded 2nd Runner Up Project at Samsung Electromechanics Tech Forum
2019	Awarded “Certificate of Appreciation” for outstanding contribution towards Technical Excellence
2017	Awarded “ILP Kudos” for outstanding performance during training
2013	Awarded “North America Alumni Association Scholarship” award for being the 2nd branch topper in Information Technology
2010-2012	Received "Timken India Limited Scholarship 2012" for excellent performance in XII Awarded in Essay Competition conducted by “Department Of Atomic Energy, Atomic Minerals Directorate For Exploration And Research, Eastern Region” Ranked among top 50 students in International Olympiad Of Science at State Level