

# Aryan

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## SUMMARY

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A M.Tech Scholar specializing in Artificial Intelligence from NIT-Agartala, currently serving as a Project Trainee at STMicroelectronics in Greater Noida. Possessing over 2 years of invaluable experience in this relevant domain, including roles as a Research Scholar.

## TECHNICAL SKILLS

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**Languages:** Python,C/C++.

**Core:** Machine Learning,Deep Learning(Pytorch,TF,Keras),Statistics,Computer Vision,Pandas,Numpy,Scikit-Learn,NLP(core).

**Databases:** SQL,MongoDB,Cassandra,HBase,HDFS,HIVE,BigDATA

**Clouds,Deployments and Ops:** AWS,GCP,Azure,Heroku,Kubernetes(K8's),Docker,Jenkins,CICD pipeline,Airflow and Kafka for streaming.

**Version Control:** GitHub,DVC

**EDA Tools:** Matplotlib,Plotly,Seaborn

**Generative AI:** Prompt Engineering,Langchain,VectorDB,Transformers.

**Fronted Framework:** Streamlit,Flask.

## WORK EXPERIENCE

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**Project Trainee (Data Science)**

July 2023 - Present

**STMicroelectronics Private Limited (Noida)**

**Tools and Languages Used:** Langchain, EDA, PyTorch, Pycharm(IDE), Organisational GPT(Internal),

- Leveraged cutting-edge technologies including Gen AI, Prompt Engineering, Langchain Framework, LLMs Models, and conducted research and development on Knowledge Graph.
- Applied Google Vertex AI, LLama2, and RAG to develop advanced AI applications, enhancing automation processes for organizational benefits.
- Engaged in researching template requirements, collaborating closely with the DRM team to develop, test, and document templates.
- Contributed to the enhancement of organizational efficiency through the implementation of innovative AI solutions and thorough documentation and training initiatives.

**Project Intern (Full Stack Data Science)**

July 2022 - 2023

**Ineuron (Bengaluru)**

**Tools and Languages Used:** Cloud Tools for Deployment, EDA for Statistics, PyTorch,Scikit-learn,keras for Deep learning Framework, Pycharm(IDE),

- Primary objective: Utilize classical machine learning tasks for fault detection risk estimation for sensors.
- Tasks include data exploration, cleaning, feature engineering, model building, and testing.
- Analyze data to identify inconsistencies and errors, ensuring data quality.
- Extract relevant features crucial for predictive modeling.
- Construct predictive models and evaluate their performance to enhance wafer fault detection accuracy.

- International Conference on Computational Intelligence in Pattern Recognition, 2022  
[in https://link.springer.com/chapter/10.1007/978-981-99-3734-9\\_4](https://link.springer.com/chapter/10.1007/978-981-99-3734-9_4)
- International Conference on Machine Learning and Data Engineering, 2023 (ICMLDE), Journal (In Proceedings).  
Title : Precise lesion analysis to detect diabetic retinopathy using Generative Adversarial Network (GAN) and Mask-RCNN.
- Modified Deep Residual Network for Semantic Segmentation.  
IEEE, UOH'23 (In Proceedings).

## PROJECTS

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**Anomaly detection of wafer sensors.**

**Tools :** Kafka for Continuous Streaming, Pycharm (IDE), AWS (Elastic beanstalk) for Deployments, Scikit-learn, Git + CICD Tools.

Developed a classification methodology aimed at predicting the quality of wafer sensors, leveraging client-provided data, Implemented an end-to-end deployment process utilizing Continuous Integration/Continuous Deployment (CICD) pipeline.

**STmicroelectronics Hackathon'24 (TReX-Test Regression EXplorer and Analytics Dashboard)**

**Tools :** Python EDA, Plotly dashboard, Django web application, DVC, Docker, Git, K8s, OpenAI, Langchain.

Developed a Test Regression Analytic dashboard to streamline data analysis. Provided with 300 CSV regression files, each containing diverse test cases, alongside their corresponding 300 coverage files. The dashboard gives a detailed breakdown of regression and coverage metrics, presenting insights on a week-to-week, month-to-month, category-specific, and customized owner/client basis.

**Identification Of Diabetic Retinopathy Using Robust Segmentation Through Mask R-CNN.**  
**Tools :** Pytorch, Keras, LaTeX, Google Colab.

Here the main aim is to find out the segmented image with the nearly accurate bounding box to detect the lesions caused by Diabetic Retinopathy, named as Exudates and Microaneurysms using the image Segmentation techniques like Mask-RCNN.

## EDUCATION

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**M. Tech in Artificial Intelligence (Computer Science & Engineering)**

**CGPA: 9.26**

National Institute of Technology, Agartala (NIT-Agartala)

August 2022 – June 2024

**B.Tech in Information Science & Engineering**

**CGPA: 8.7**

Nitte Meenakshi Institute of Technology (NMIT), Bengaluru

July 2017 - June 2021

## CERTIFICATIONS & ACHIEVEMENTS

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- GATE-2022 Qualified Top 93% Percentile.

- The Ultimate DevOps BootCamp,Udemy
- 5th International Conference by CIPR'22.
- NPTEL , Python Advance (97%)
- Certified Distance Learning Course Completion,University of Michigan.