# Lenwyn Lobo
**Data Engineer**

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Portfolio Website: https://lenlobo.github.io/Portfolio/

## EDUCATION

**Constructor University (formerly Jacobs University Bremen)**          Bremen, Germany
**Master of Science (MSc)**                                              Sept 2021 - Aug 2023
Data Engineering
CGPA: 1.96
Relevant Coursework: Data Analysis, Artificial Intelligence, Deep Learning, Image Processing

**St. Francis Institute of Technology**                                  Mumbai, India
**Bachelor of Engineering (BE)**                                         Sept 2016 - Aug 2020
Computer Science Engineering
CGPA: 1.95
Relevant Coursework: Artificial Intelligence, Soft Computing, Computer Graphics

## WORK EXPERIENCE

**Testia GmbH**                                                          Bremen, Germany
**Data Engineering Intern and Master Thesis Student**                    Sept 2022 – Aug 2023
- Engineered and deployed an end-to-end Machine Learning (ML) Pipeline for 3D Volumetric Data, resulting in an efficiency improvement of 50% in time.
- Designed a U-Net architecture, achieving an impressive 86% accuracy in detecting anomalies within 3D CT Scans of manufactured parts during model training.
- Handled large computationally-expensive 3D data, demonstrating proficiency in managing datasets where individual files reached approximately 45 gigabytes in size.
- Iterated through 5 versions of machine learning models, progressively enhancing performance through model fine-tuning and strategic re-annotation of data as needed.
- Trained a U-Net model, revolutionizing data analysis by significantly reducing the manual workload for experts where the model achieved the same results that would typically take weeks for experts to accomplish, completing the task within a matter of hours.

## PROJECTS

**Porosity Detection in CT Images using CNNs (U-Net)**                    Feb 2023
- Devised a specialized UNet model specifically designed for the identification of pores and defects within CT image scans of intricate aerospace components.
- Implemented cutting-edge methodologies, incorporating MONAI for segmentation tasks and leveraging the UNet Convolutional Neural Network architecture for optimal performance.
- Facilitated data annotation through the adept use of 3D Slicer and MONAI Label, ensuring precise and comprehensive labeling for model training.

**Automatic Speech Recognition and Summarisation for Lecture Videos** Sept 2022
- Researched about ASR Systems and Summarisation Models.
- Tested Kaldi and newer ASR models for the purpose of transcription.
- With the help of HuggingFace Transformers, summarized the transcripted text.

**Eye Disorder Classification using ResNets and OCT Images** Jan 2020
- I undertook this project as part of my research for my bachelor's thesis.
- Developed an application using ResNets to predict and categorize OCT (Optical Coherence Tomography) scans of the retina into four different disorders.
- Achieved a notable accuracy rate of 83% with the test dataset, underscoring the effectiveness of the developed tool in diagnosing retina disorders.

## SKILLS

**Programming:** Python, SQL, R, Java, PHP, C, Perl, HTML, JavaScript
**Technical Skills:** Deep Learning, Machine Learning, Data Visualisation, Image Processing, Data Analysis, Natural Language Processing, FastAPI
**Data Science Tools:** PyTorch, CNN, U-Nets, Scikit-Learn, Apache Spark, PySpark, Data Pipelines, Lakehouse, Data Lake, Data Warehouse, GCP, MySQL, Big Data, Pandas, Numpy, Jupyter, TensorFlow, NLTK, Kaldi, HuggingFace, Azure Data Factory, Synapse Analytics, Dataflow Gen2
**Data Visualisation:** 3D Slicer, MITK, Plotly, Dash, Matplotlib, Seaborn, Power BI, Tableau
**Other Knowledge:** Confluence, Docker, Git, ETL, Microsoft Azure, Kanban, Flask, Kubernetes, DAX Studio, Microsoft Fabric
**Soft Skills:** Effective Communication, Team Collaboration, Adaptability, Problem Solving, Time Management, Pragmatism, Attention to Detail, Interpersonal Skills, Enthusiastic

## ADDITIONAL

**Languages:** English (Fluent), German (Intermediate), Konkani (Native), Hindi (Fluent), Marathi (Fluent)
**Certifications & Training:** Microsoft Certified: Azure AI Fundamentals, Microsoft Fabric Analytics Engineer (Training), Microsoft Azure Data Engineer (Training), Introduction to Programming Using Python by Microsoft, Introduction to Data Science using Python (Udemy), Machine Learning and AI using Python (On Campus Training)