# Shenin Francies

Data Scientist │ Medical Engineer

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## SKILLS

**Data Science with Python**

`Numpy` `Pandas` `Scipy` `Matplotlib` `Seaborn` `Scikit-learn`

**Deep Learning**

`TensorFlow` `Keras`

**Computer Vision**

`OpenCV` `YOLO` `Mediapipe`

**Data Visualization**

`PowerBI` `Tableau`

**Cloud Platform**

`Amazon Web Services`

**Engineering**

`Electronics` `PCB Design` `Medical Equipment Calibration`

**Others**

`MATLAB` `MySQL` `Docker` `SQL Server Management Studio`

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Detail-oriented Data Scientist, with strong analytical and technical skills, driven by the desire to achieve measurable results. Recent graduate of Medical Engineering that conducts independent researches. Conversant in culture diversity due to exposure to international relations based off of studying and living in India, Kuwait, United Arab Emirates and Germany.

## PROFESSIONAL EXPERIENCE

**Luminar Technolab, India**  (07/2022 - 03/2023)
Intern - Data Science

- Familiarized with the process of Data Cleaning & EDA utilizing relevant python libraries such as Pandas, Matplolib etc.
- Applied Supervised and Unsupervised Machine Learning techniques on datasets to evaluate its performance on the unseen data.
- Derived meaningful insights that add business value to the organization through data visualization tools such as Tableau and PowerBI.
- Mastered the fundamentals of OpenCV and Mediapipe through key projects.
- Developed a strong foundation in Neural Networks and Deep Learning frameworks such as Tensorflow and Keras.
- Familiarized with real-time object detection system through YOLO.

**Cyrix Healthcare Pvt. Ltd., India**  (09/2022 - 10/2022)
Trainee - Advanced Biomedical Program

- Know-how in repair & analysis of general equipment such as Nebulizer, Patient Monitoring System and Oxygen Concentrator.
- Familiar with the principle & key components of dialysis machine, CT and MRI.

**Institute of Technical Medicine, Germany**  (08/2021 - 09/2021)
Research Assistant

- Researched the Two- and Four-Electrode methods pertaining to Electrical Impedance Tomography.
- Built circuits, assessed its signal strength and improvised the circuits for optimal performance.

## EDUCATION

**Hochschule Furtwangen University, Germany**  (09/2019 - 03/2022)
Master of Science, Biomedical Engineering  Grade: 85%

- Development of electrical measurements for biological tissues.
- Temporal Recruitment of lung units and their impact on lung compliance using MATLAB.
- Fundamentals of Artificial Intelligence in Medicine and Artificial Organs.

**Heriot-Watt University, United Arab Emirates**  (09/2016 - 11/2019)
Bachelor of Engineering, Electrical & Electronics Engineering  Grade: 90%

- Development of a prototype of a user-interactive robot for theme parks in a laboratory environment using C and C++.
- Calibration and sequential analysis of differential control of a prototype robot in a laboratory environment using C.
- Fundamentals of Control Systems & Applications in Power Engineering.

## WORK SAMPLES

**Evaluation of Performance Metrics in Machine Learning** (09/2022 - 01/2023)
Study the effects and/or influence of over-/under-sampling, accuracy, ROC & Precision-Recall Curves on the predicted outcomes.

Milestone Project: Application of NLP & ML techniques to classify a drug review and evaluate the performance metrics using ROC and Precision-Recall Curve.

🔗 **www.github.com/SheninFrancies/Machine-Learning-and-Data-Science**

`Supervised & Unsupervised Machine Learning`

`Natural Language Processing`

**Comprehension & Evaluation of Performance Metrics in Computer Vision** (01/2023 - 02/2023)
Understand the fundamentals of Performance Metrics such as IOU and mAP and attempt to study their effects on the accuracy in predictions.

Milestone Projects:

- Automated Media Player Control using hand gestures & Drowsiness detection.
- Car Counter, People Counter; Custom Training using YOLOv8 to detect Personal Protection Equipment & Surgical Instruments.

🔗 **www.github.com/SheninFrancies/Deep-Learning-and-Computer-Vision**

`OpenCV` `Mediapipe` `YOLO`

**Exploration of valuable insights by querying databases and seamlessly integrating with Tableau.** (03/2023 - 03/2023)
Understand the Fundamentals of SQL utilized to Query Databases for data cleaning and exploration.

Milestone Projects:

- Data Exploration on the up-to-date Covid-19 Dataset using MS SQL Server Management Studio to find insights on the mortality and vaccination during the pandemic.
- Data Cleaning using MySQL on the Nashville Housing dataset to remove redundant columns and make the data more readable and usable.
- Understanding Database Triggers through implementation on an instagramesque clone created from scratch.

🔗 **www.github.com/SheninFrancies/SQL**

`MySQL` `Microsoft SQL Server Management Studio`