



# Jelin Raphael Akkara

## Masters in Physics of Data

### Contact

#### Email

jelinraphaelakkara@gmail.com

#### Portfolio Site

<https://jelinr.github.io>



### Skills

#### Programming Languages

- **Proficient:** Python, R
- **Familiar:** C++, HTML, CSS

#### Frameworks and Libraries

- **Big Data Management:** SQL, Dask, PySpark
- **Machine Learning:** TensorFlow, Keras, Scikit-Learn

### Certificates

2022 | Google Data Analytics  
Professional Certificate

2021 | Einstein Toolkit  
Workshop on Numerical  
Relativity

### Projects

#### Time Series Analysis using Transformers

Trained a transformer model that predicts the occurrence of a crash (magnetic reconnection) during plasma evolution using a heavily imbalanced dataset. The performance was compared against more traditional architectures (CNN, DNN) and the former proved to be a better and reliable model.

#### Fake News Classification using Multinomial Naive Bayes

Built an efficient text classification model that recognizes varying degrees of fake news using the multinomial naive bayes algorithm. This was implemented using a SQL-based approach for efficiency, enabling the model to train and validate on a large dataset consisting of 20800 rows (each row containing an average of 4544 words) in under 30 seconds.

#### Distributed Analysis of Big Data using Dask

Implemented anomaly detection on a large industrial dataset (~5GB) using Dask, conducting a distributed approach in implementing the detection algorithm and obtaining the correlated variables. This required using a Virtual Cluster of 3 worker nodes.

### Education

- **Masters in Physics of Data** 2022 - 2024  
University of Padua, Italy  
GPA (Current): 28.22 / 30
- **B.Tech in Engineering Physics** 2018 - 2022  
National Institute of Technology, Calicut, India  
GPA: 8.47 / 10