# Vighnesh N Ganesh

Analyst, Goldman Sachs | Visiting Researcher, London Business School | Off-roading enthusiast
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## EDUCATION

**BITS Pilani, Pilani Campus** • Jul 2019 – Jun 2023
B.E. Computer Science • Minor in Finance CGPA: 8.2

## KEY ACCOMPLISHMENTS

- **Authored a chapter in** Neue Dimensionen in Data Science • Buy the Book

## PROFESSIONAL EXPERIENCE

**Goldman Sachs, Analyst** • Full time: Jul 2023 – Present • Internship: Jun - Aug 2022

- **Big Data:** Backfilled 13.5 million records from Goldman's s3 datastore to Mongo DB using **Hadoop**
- **Recurring ETL:** Developed an endpoint to ETL partner data using a scheduled FTP pull with Kafka fallback
- Ideated & organized an event that recorded the highest participation in the all-India Goldman Sachs Hackathon

**London Business School, Visiting Researcher** • Aug 2022 – Jul 2023
*Publications in IEEE & Quantitative Finance Journal*

- **Forecasting:** Modelled imbalance prices of British electricity market using weather & market factors
- **Published the new SOTA** algorithm on the IEEE Transactions on Energy Markets, Policy and Regulation
- **Risk Modelling:** Trained Neural Networks with shared initial layers to forecast multiple upper & lower quantiles
- **Reinforcement Learning:** Designed & trained a Q-learning FCNN agent to take market positions using market & environmental state variables

**University of Warwik, Data Science for Social Good Fellow** • Jun - Aug 2021
*GitHub Link to open source Streamlit application*

- Worked with The Federal Ministry for Economic Affairs and Energy of Germany to forecast unemployment rates
- **Reduced MSE by 50%** from 0.3+ to 0.164 by breaking up forecasts county wise & modelling each using SARIMA
- **Built a GUI app** to deploy all models, aggregation functions & visualizations with abstraction for use by economists

## ACADEMIC PUBLICATIONS

- Forecasting Imbalance Price Densities with Statistical Methods and Neural Networks • Read IEEE Article
- Algorithmic Trading of Real-time Electricity with Machine Learning • Under Journal Review

## PERSONAL PROJECTS

**Image Domain Translation using GANs** • Deep Learning

- Adapted NICE-GAN & CycleGAN to translate 3-channel images into 21-channel images to aid security solutions
- Developed a hybrid architecture with 100M+ parameters & gigabytes of training data on remote Linux server

**Correlating the Green Cover of a County to CO2 Emissions** • Landsat Image Processing

- Inferred Correlations using NASA's OCO-2 satellite images for CO2 emissions & calculating the green cover from LANDSAT images using Deep Neural Networks

## EXTRACURRICULARS

**Off-roading**

- Trained on flat track racing, adventure/technical trails, focusing on motorcross circuit racing

**Music**

- Performed at Guiness World Record setting concert "Stop Child Labor" & Trinity College Level 4 Percussionist