



# KIRTESH PATEL

MASTERS STUDENT AT FRANKFURT SCHOOL | P&G - R&D

## EXPERIENCE

### WORKING STUDENT - R&D AI/ML, DATA SCIENCE, MODELLING

P&G | April 2023 - Present, Frankfurt, Hessen

- Fine Tuned LLMs for prompt recognition and entity recognition.
- Developed AI segmentation and optimization techniques using PyTorch, SciPy, and Keras for the detection and design generation of optimized hygiene products.
- Effectively oversaw code, versions, and Agile-Scrum practices on GitHub Enterprise, ensuring efficient collaboration and streamlining.

### INTERNSHP - AI/ML, NLP

RegHub | March 2024 - Present, Frankfurt, Hessen

#### Roche Incubation Project

- Developing LLM capabilities to conduct regulatory analysis and semantic search of regulatory changes, facilitating streamlined regulatory checks in pharmaceutical industry.
- Ensured scalability and efficiency through strategic utilization of cloud-based services, facilitating seamless workflow integration.

### CO-OP STUDENT - AI/MP, NLP, DATA SCRAPING

RegHub | Sept 2023 - Jan 2024, Frankfurt am Main

#### Competitor News Analysis using NLP techniques

( pip install reghub-pack )

- Developed diverse NLP capabilities through the creation and fine-tuning of multiple models, encompassing tasks such as multi label classification, similarity analysis, and news mapping.
- Fine-tuned LLaMA model for extracting key information enhancing its generative recommender system capabilities through Causal Language Modeling.

### ENGINEER LEVEL 1

Worley (FKA Jacobs Engineering) | Feb 2021 - Aug 2022, Mumbai

Renewable energy, data center projects.

- Reduced a significant amount of manpower using automation, AI, bots related to design, analysis and technical documentation.
- Implemented data analysis, quantitative calculations and visualization of technical parameters in Excel, Power BI and Python.
- Developed pipelines of Excel sheets and Python script to incorporate design changes automatically, reducing manual efforts.

### PROJECT INTERN

Worley (FKA Jacobs Engineering) | Jan 2020 - May 2020, Vadodara

- Developed, analyzed, evaluated technical data sheets for insights.
- Conducted in-depth technical bid data analysis of equipment, extracting valuable insights for decision-making.
- Explored data-centric project delivery methodologies, focusing on automation bots and AI applications within the engineering industry.

Data Science and AI enthusiast, proficient in data modeling, analytics, NLP, Vision. Skilled in developing, training, and deploying ML/Deep Learning models to solve complex business and technical problems. Seeking to leverage expertise in data-driven decision-making and data-centric project delivery in dynamic environments.

### Programming Skills

Python	●●●●●●
R Progg.	●●●●●●
MATLAB	●●●●●●
SQL	●●●●●●

### Miscellaneous Skills

Power BI	●●●●●●
GIT	●●●●●●
Microsoft 365	●●●●●●
AWS /	●●●●●●
paperspace	●●●●●●
Shell	●●●●●●

### Key Python Libraries

Pandas | Numpy | Scipy |  
Matplotlib | Math | Pulp |  
Scikit learn | PyTorch  
| Transformers | SpaCy |  
NLTK | Blob | TensorFlow |  
Keras | PlotLy | StatsModel  
| PIL | OpenCV | Django

## CONTACT

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## INTERNSHIP

Reliance Industries Ltd. | June 2019 - July 2019, Jamnagar, India

Efficiency, Quantative Performance analysis, Maintenance of pumps.

- Carried out quantative performance calculations and visualization performance of pump in MATLAB.
- Implemented predictive maintenance of pump using data analysis and statistical methods.

## EDUCATION

### MASTERS APPLIED DATA SCIENCE

Frankfurt School of Finance and Management | Aug 2022 - Present, Frankfurt, Hessen | Grade: 84 %

### B.TECH MECHANICAL ENGINEERING

Pandit Deendayal Energy University | Aug 2016 - Sept 2020, Gandhinagar, India | Final Grade: 76 %

## PROJECTS

2023

#### TRANSFORMERS FOR TIME-SERIES FORECASTING | FRANKFURT SCHOOL

Implemented and trained PatchTST and Informer multivariate time series models in PyTorch, utilizing transformer architectures for accurate predictions.

2023

#### EMAIL CLASSIFICATION USING LLM | DEUTSCHE BAHN

Fine-tuned BERT and XLNet LLM models in PyTorch for text classification, utilizing various regularization techniques. Employed regular expressions, NLTK, and spaCy for email dataset preprocessing. Implemented LLAMA generative AI model for email category recommendation.

2023

#### COMPARISON OF ACTIVATION FUNCTION | FRANKFURT SCHOOL

Evaluated cutting-edge activation functions in Deep Learning models with Keras TensorFlow, analyzing real-time charts to compare accuracy, error rate, and convergence. Addressed case-specific phenomena.

2022

#### TESTING FOR WEAK-FORM EFFICIENCY IN STOCK MARKET | FRANKFURT SCHOOL

Conducting time series analysis with deep LSTM/RNN architecture and SARIMA methods to predict stock prices/indices, assessing predictability, and identifying exogenous factors influencing value.

2022

#### CREDIT CARD DEFAULT PREDICTION USING CLASSIFICATION MACHINE LEARNING TECHNIQUES | FRANKFURT SCHOOL

Preprocessing, visualization of personal data, credit card using pattern data in python. And therefore predicting the future customer risk behaviors' using classification ML.

2021

#### DETERMINING RIDE SHARING TAXI DEPLOYMENT IN THE NEW YORK BY REGRESSION MACHINE LEARNING MODELS | MATHWORKS CHALLENGE

Gathered and preprocessed data from Uber Movement, incorporating machine learning models to predict ride options and facilitate ride-sharing

2017 - 2019

#### BAJA SAE INDIA | SAE INTERNATIONAL

*Vehicle Dynamics Team Lead*

#### All India Rank 1 - Virtual Design Event

Optimized ATV performance with Machine Learning, optimization, data analysis techniques, reducing maintenance and enhancing lap times. Designed rugged vehicle dynamics system using mechanical and stastical techniques.