




# Asad Ali

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 Erlangen, 91058, Germany

## SUMMARY

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Experienced Data Scientist with a strong background in developing and deploying machine learning models to optimize business processes, predict sales trends, and enhance digital marketing strategies. Currently pursuing a Master's degree in Artificial Intelligence at FAU, Erlangen-Nuremberg.

## WORK EXPERIENCE

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### GFK

Nuremberg, Germany

Working Student

April 2022 - present

- Worked as a key member of a data science team to design and implement machine learning models for forecasting sales trends on the Amazon Marketplace
- Conducted thorough statistical testing using A/B testing, chi-square tests, and t-tests to validate customer behavior insights
- Created interactive dashboards and visualizations using Python and Power BI to present key findings to stakeholders
- Performed extensive EDA to understand the underlying patterns and relationships within the sales data

### ActiveBas

Remote

Data Scientist

August 2020 - October 2021

- Utilized Machine Learning models like XGBoost and Deep Neural Networks to optimize energy consumption in buildings, using HVAC temperature controls, resulting in significant cost savings and improved sustainability
- Used techniques such as cross-validation, hypothesis testing, and confidence intervals to ensure the robustness and generalizability of models
- Designed and implemented CI/CD pipelines using tools such as Jenkins, Docker, and Kubernetes to automate the deployment and monitoring of machine learning models

### Sleepare

Remote

Data Scientist

September 2019 - July 2021

- Created a machine learning model using Recurrent Neural Networks (RNNs) and Ensemble models to predict Google click-through rates (CTR) for specific keywords related to mattress stores
- Leveraged Google Search Console data to train the model, achieving a significant improvement in CTR prediction accuracy
- Designed and implemented a bot using Genetic Algorithm to identify and select top-performing keywords and simulate user searches on Google, effectively boosting organic traffic to the store website.

## PROJECTS

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### Siamese Network based Image Similarity for Instagram Posts

[InstaModel](#)

- Developed a Siamese Network using ResNet backbone to find similar posts on Instagram using Image Similarity and Pose Estimation
- Trained the Network leveraging Triplet Loss in PyTorch using a scraped Dataset using OpenPose for pose estimation, achieving a validation accuracy of 76%

### Distributed Password Cracker and Profiler

[Brutus](#)

- Worked on creating a Distributed Password hash cracker using MPI for synchronization between nodes
- Used langchain for deploying a Retrieval Augmented Generation which utilizes Large Language Models and the context about the user to generate potential password combinations

### Keyword based Twitter Sentiment Analyzer

[TweetBot](#)

- Created a Support Vector Machine based Sentiment analyzer trained on Sentiment140 Dataset
- The Sentiment Analyzer uses multiple keywords from user input and generates a comparative analysis of the tweets
- Used Streamlit for front end, postgres database and scikit-learn for model training

### Random Forests based Energy Prediction for C++ Programs

[CEnergy](#)

- Worked on creating a Machine Learning model to predict the energy consumption of C/C++ Programs using Control flow graphs
- Used Scikit-learn for model training and validation, Flask for API and Electron JS for the frontend

## EDUCATION

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Masters (AI) at **FAU, Erlangen-Nuremberg**  
Bachelor's (CS) at **FAST-NUCES, Pakistan**

2022 - present  
2015 - 2019

## SKILLS

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<b>General Skills</b>	Machine Learning, Deep Learning, Data Visualization, EDA, Statistical Analysis, Pattern Recognition, CI/CD, Agile Methodologies
<b>Technical Skills</b>	Python, Golang, Pytorch, Langchain, Numpy, Pandas, OpenCV, Plotly, Git, Docker, SQL

## LANGUAGES

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Fluent in English (written and spoken)