Mohammed Husain

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EDUCATION

Friedrich Alexander University (FAU) — Erlangen-Nurnberg
MSc in Data Science with Majors in AI & ML (GPA : 2.1**)** — **December-23**

Shri Ramdeobaba College of Engineering and Management (RCOEM) — Nagpur
B.E in Computer Science and Engineering (GPA : 9.81) — **June-21**

WORK EXPERIENCE

Delivery Hero — **June24-Present**
Data Scientist (Intern)

- Designed and developed an ML model for vendor-level and item-level matching.
- Created an ML model to estimate & forecast user numbers, enhancing predictive analysis and strategic planning.
- Designed and maintained interactive dashboards in Tableau for stakeholders, delivering real-time insights and facilitating data-driven decision-making.
- Built and managed data pipelines, performing ETL processes using Google BigQuery and Google Colab Notebooks to ensure seamless data integration and processing.

Amazon — **September23-March24**
Business Intelligence Engineer Intern

- Conceptualized and implemented an advanced pipeline model automating the generation of monthly, quarterly, and weekly reports, managing **2000+ data points** and **tracking 140+ critical business metrics**.
- Significantly enhanced operational efficiency by reducing manual labour by over **40 hours per reporting cycle**, mitigating human error, and streamlining processes.
- Engineered robust database pipelines to seamlessly extract data from Redshift and transfer it to local environments using Python and Excel sheets, optimizing data retrieval and processing workflows.
- Leveraged sophisticated dashboard environments including Shinny, IPT, and Amazon Quick Sight for in-depth data analysis and reporting, enabling data-driven decision-making and actionable insights.

Awin AG — **March22-August2023**
Working Student Data Services (Data Engineer)

- Developed and deployed an ML Publisher Recommendation model using K Means Clustering on Azure platform.
- Achieved a notable **33% month-on-month increase** in advertiser-publisher invitations through the Recommendations tab on the website, along with an **8.36% monthly rise in total invitations**.
- Led initiatives resulting in the highest weekly number of publisher invites sent by advertisers via the recommendation tab on the website.
- Leveraged Python, PySpark, and Pandas within Azure Databricks to analyze vast datasets and develop actionable insights.

Delaplex Pvt Ltd — **December20-June21**
Intern - Data Science Analytics

- Directed the Project Development Cycle from Requirement Analysis to Deployment, ensuring stakeholder alignment and project success.
- Engineered a pioneering Product Availability Machine Learning Model, leveraging advanced techniques in Python, SQL, and Azure tools, yielding significant business impact.
- Applied cutting-edge video and image processing techniques to drive actionable insights and optimize project outcomes.

Happiest Minds Technologies Pvt Ltd

COE Analytics Intern **July20-December20**

- Developed a Video Analysis POC using YOLO and implemented ML models for Image and Video classifications, showcasing expertise in advanced analytics and Image/Video Processing.
- Specialized in Image and Video Processing techniques including Face Detection and VoTT Tagging Tool, contributing significantly to project success and demonstrating advanced analytics capabilities.

PROJECT EXPERIENCE

Machine Learning: Publisher Recommendation Model **Awin AG & FAU(Erlangen)**

Master Thesis **April23-August23**

- Implemented K-Means clustering combined with ALS model for publisher-advertiser matching based on sector clusters.
- Used implicit ratings with ALS to augment data and enhance recommendation accuracy.
- Addressed challenges like data sparsity, scalability, and effectiveness with the proposed method.
- Evaluation via **MAE (0.05), RMSE (0.11)**, and manual feedback demonstrated superior performance over existing recommendations.
- Offers a business solution for advertisers with improved publisher recommendations, aiding decision-making, increasing sales volume, and enhancing advertiser satisfaction and royalties.

Anomaly Detection and Trajectory Prediction **FAU(Erlangen)**

Master Project **April22-July22**

- Real-time anomaly detection using **YOLOv5 model** on Heraeus dataset images
- Pre-processing techniques applied, including dynamic intensity cropping for extra width images and elimination of overexposed images
- YOLOv5 model trained with **97% of dataset, achieving 0.871 mAP@0.5 for 3020 images** in testing
- Successful detection of bubbles with most having **IOU > 0.9**
- Exploration of different YOLOv5 models (l, m, n, x) for efficiency evaluation.

Personalized spam filter for social networks **RCOEM(Nagpur)**

Bachelor Thesis **July20-December20**

- Developed an Android application utilizing Machine Learning algorithms (SVM) and Natural Language Processing to personalize user feeds, enhancing application utility.
- Implemented a personalized feed system based on user interests, mitigating information overload and improving user experience.
- Utilized various machine learning algorithms and natural language processing techniques to classify messages, resulting in a time-saving and user-friendly system.
- **Publication** - Biosc.Biotech.Res.Comm. Special Issue Vol 13 No 14 (2020) Pp-376-380

TECHNICAL KNOWLEDGE

Programming Languages & Libraries: Python (NumPy, Pandas, Plotly, Matplotlib, Scikit-learn, BeautifulSoup, YOLO, PyTorch, TensorFlow, Flask), SQL, JavaScript, Java, C, C++, HTML, CSS, ReactJs

Big Data & Cloud Platforms: PySpark, Apache Spark, Microsoft Azure, Azure DataBricks, Azure DataFactory, Azure DevOps, Amazon RedShift, Amazon EC2, AWS, Google Cloud Platform, Google Firebase, Google BigQuery

Data Analysis & Visualization: Tableau, Amazon QuickSight, Google Firebase, MS Office, Looker

Version Control & Collaboration Tools: Git, Jira Board, R Shiny, IPT, Quick Sight, Power BI, Tableau

Data Science & Machine Learning: Machine Learning, Deep Learning, ETL Pipelines, Data Science Pipeline (cleaning, wrangling, visualization, modelling, interpretation), Google Colab

Other Technologies & Tools: MySQL Workbench, Visual Studio, Canva Pro, Android Development (Android Studio), MS Office (MS Word MS PowerPoint MS Excel MS), GitHub