# Harsh Rana

harshrana1519@outlook.com | 017685927737 | Dortmund, Germany | linkedin.com/in/harshweb98

github.com/HarshStats

Data Science Master's student at TU Dortmund specializing in large-scale data analysis, statistics, machine learning, AWS, and NLP. Eager to apply my skills in a Data Science or Data Analytics student job or internship to contribute to impactful projects.

## EDUCATION

**Master of Data Science** present
*Technical University Dortmund* Dortmund, Germany

**Bachelor of Information Technology (1.3 GPA)** 2015 – 2019
*Gujarat Technological University* Ahmedabad, India

## SKILLS

**Programming Languages** ● ● ● ● ●
- Python
- R
- SQL

**Cloud & DevOps** ● ● ● ● ○
- AWS (Amazon Web Services), Microsoft Azure
- Docker, CI/CD (GitHub Actions)

**Model Deployment & MLOps** ● ● ● ○ ○
- Flask, FastAPI, Streamlit
- AWS SageMaker, TensorFlow Serving

**Machine Learning & AI** ● ● ● ● ●
- Data Exploration & Transformation (ETL)
- Natural Language Processing (NLP)
- Regression & Classification Models
- Neural Networks & Deep Learning
- Model Evaluation & Optimization

**Data Visualization** ● ● ● ● ●
- Tableau, Power BI, Matplotlib, Seaborn

## PROJECTS

**Kidney Disease Classification – Deep Learning & MLOps** 🔗
- Developed a deep learning model for **kidney disease classification**, integrating **MLOps best practices** for reproducibility and scalability.
- Managed datasets and model versions using **Data Version Control (DVC)** to ensure traceability.
- Tracked experiments with **MLflow**, enabling effective performance monitoring and hyperparameter tuning.
- Automated **CI/CD pipelines** using GitHub Actions to streamline model testing and deployment.
- Deployed the trained model to **Azure & AWS**, ensuring real-time inference capabilities in a production environment.

**Chicken Disease Classification – MLOps DVC Pipeline** 🔗
- Built a **deep learning model using VGG16** to classify chicken diseases from fecal images.
- Designed an end-to-end **MLOps pipeline with DVC**, ensuring reproducible model training and version control.
- Containerized the application with **Docker**, facilitating scalable and efficient deployment.
- Developed Jupyter Notebooks for model experimentation, monitoring, and iterative performance improvements.

**Practical Data Science Specialization – AWS & SageMaker** 🔗
- Ingested and transformed large datasets using **AWS CLI, Glue, and Athena**, ensuring efficient data processing.
- Built **end-to-end pipelines in Amazon SageMaker**, automating data preprocessing, model training, and deployment.
- Trained **text classification models using SageMaker BlazingText & fine-tuned BERT-based (RoBERTa) models**.
- Implemented **A/B testing, autoscaling, and performance monitoring** for robust cloud-based model deployment.
- Integrated **SageMaker Clarify** to detect and mitigate data bias, ensuring ethical AI practices.

**Boston Housing Price Prediction – Machine Learning & DevOps** 🔗
- Developed a **machine learning model** to predict housing prices based on the **Boston Housing dataset**.
- Preprocessed data and optimized model performance using regression techniques.
- Automated **CI/CD workflows with GitHub Actions**, integrating testing and deployment pipelines.
- Deployed the model using **Docker and cloud-based solutions**, enabling real-time predictions.

## PROFESSIONAL EXPERIENCE

**Project Co-Ordinator and Management**                                    05/2019 – 11/2019
*Uplers Pvt. Ltd.*
- Managed multiple projects, improving efficiency by 10% and ensuring on-time delivery.
- Developed Power BI dashboards to track project performance, budgets, and key metrics.
- Analyzed datasets using SQL, Python, and Excel, providing insights for decision-making.
- Automated reporting workflows, optimizing resource allocation and risk assessment.

**Internship in Internet of things (IOT)**                                    06/2018 – 03/2019
*Digimation Technologies Pvt Ltd*
- Designed an **intelligent game controller** for an **IoT-based game** using **hand gestures**.
- Developed the game and controller integration using **Arduino UNO** and **MPU 6050 sensor**.
- Implemented **accelerometer** and **3-axis gyroscope** for precise motion tracking.
- Engineered a **3-pivot control system**, enabling seamless gesture-based gameplay.
- Publishd a reseach paper, "An IOT based game controlling device  ⊘ "

## COURSES FOR DATA SCIENCE AND MACHINE LEARNIN

**Machine Learning**  ⊘
*Coursera Stanford University*
Comprehensive course covering machine learning algorithms and applications.

**Practical Data Science on AWS**  ⊘
*Coursera*
Hands-on course focusing on applying data science techniques using AWS services, particularly Amazon SageMaker.

**Introduction to Data Science**  ⊘
*Coursera*
Foundational course introducing key concepts in data science.

**Analyze Datasets and Train ML Models using AutoML**  ⊘
*Coursera*
Training on using AutoML tools for dataset analysis and model training.

**Build, Train, and Deploy ML Pipelines using BERT**  ⊘
*Coursera*
Course on constructing machine learning pipelines with BERT models.

**Optimize ML Models and Deploy Human-in-the-Loop Pipelines**  ⊘
*Coursera*
Training focused on optimizing machine learning models and implementing human-in-the-loop pipelines.

**Microsoft Power BI Desktop for Business Intelligence**  ⊘
*Coursera*
Course on utilizing Power BI Desktop for creating business intelligence reports.

## LANGUAGES

| English | ● ● ● ● ○ | German | ● ● ○ ○ ○ |
|---------|-----------|--------|-----------|
| Hindi | ● ● ● ● ○ | Gujarati | ● ● ● ● ● |

## INTERESTS

Guitar Playing  |  Cooking and Experimenting  |  Exploring tech innovations  |  DIY Projects  |  Photography