



Istiyak H. Siddiquee

RA @ UniKlinikum, Magdeburg, DE.

- 2 July, 1992
- 39106 Magdeburg.
- +49 176 37133755
- istiyaksiddiquee@gmail.com
- http://istiyaksiddiquee.com
- https://www.linkedin.com/in/istiyaksiddiquee
- https://tinyurl.com/siddiquee-scholar

Tech Skills

- Python NodeJS Java Golang
- MachineLearning XGBoost SHAP
- LIME XAI Fairness MLFlow Pandas
- Numpy SKLearn
- MLOPs Grafana Prometheus
- EvidentlyAI
- Airflow Kafka Pulsar dbt Prefect
- Flyte GreatExpectation
- Docker Kubernetes Terraform Ansible
- GCP aws DigitalOcean Ray istio
- Spring Hibernate django flask
- fastAPI NestJS Angular TypeScript
- MongoDB PostgreSQL MySQL TSQL
- Git CI/CD maven gradle Jenkins
- Vagrant Bash UnitTesting SonarQube

Professional Experiences - 7+ Years

Jan '21 – Present

BackEnd and Machine Learning Engineer

Universitätsklinikum Magdeburg

- **BackEnd:** Re-designed and re-implemented an existing MVC-based monolithic server in a microservice-based modular architecture to accumulate IoT sensor data with NestJS, MongoDB, Docker, Nginx, MinIo, and RedisDB.
- **DevOps:** Developed a Docker GitHub Runner-based CD pipeline for faster code deployment. Also, built a dockerized application for observability with Grafana and Prometheus and a log aggregation platform using ELK-stack.
- **Machine-Learning Engineering:** Developed a Python-based pipeline for feature extraction and model development. Also developed a FastAPI, MinIo, MongoDB-based application to produce online predictions. In addition, built a proof of concept with EvidentlyAI, Grafana, and Prometheus for monitoring data-drift and the prediction performance of the ML model.

March '17 – March '18

BackEnd and DevOps Engineer

Orion Informatics Ltd.

- **BackEnd:** Developed and maintained web server in TypeScript, Angular, Java, MSSQLServer, Docker, SonarQube.
- **DevOps:** Developed a CI pipeline with Docker, Groovy, TestNG, SonarQube, and Jenkins pipeline as code.
- **Kubernetes:** Installed and Administered several on-prem and cloud Kubernetes clusters in IBM, GKE, DigitalOcean.

Nov '14 – March '17

BackEnd Engineer

BizMotion Ltd.

- **BackEnd:** Designed, developed, and maintained a business automation software from scratch in Java Spring, with Hibernate, PostgreSQL, etc.

Publications

Jan '24

Telemedical Monitoring of Plantar Temperature in Diabetic Patients at Risk of Foot Ulcers: The Randomized Smart Prevent Diabetic Feet Trial | 🌐
Deutsches Ärzteblatt International '24

Sep '23

MICDIR: Multi-scale Inverse-consistent Deformable Image Registration using UNetMSS with Self-Constructing Graph Latent | 🌐
Elsevier

Aug '22

Telemedical Monitoring of Plantar Foot Temperature in Patients With Diabetes and High Risk for Limb Disorders: Smart Prevent Diabetic Feet Study (SPDF) | 🌐

Feb '22

Abstract - Multi-scale UNet with Self-Constructing Graph Latent for Deformable Image Registration | 🌐
ISMRM 2022

May '21

Abstract - A Comparative Study of Deep Learning Based Deformable Image Registration Techniques | 🌐
ISMRM 2021












June '21

Book Contribution - Advances in Streamflow Forecasting — from Traditional to Modern Approaches | 🌐
Elsevier Limited, Oxford, UK.













Istiyak H. Siddiquee

RA @ UniKlinikum, Magdeburg, DE.

Volunteering Experience

-  Volunteer Data Scientist
Data Kind, since December 2022 | 
-  Volunteer Data Scientist,
DSSG-Berlin, since June 2022 | 
-  Volunteer Data Scientist, Statistics Without
Borders, since Feb 2022 | 
-  Academic Mentor, Faculty of Informatics,
Otto-von-Guericke University
June '22 – Dec '23 | 
-  President, United Cultural Alliance, SUST.
Nov '13 – Feb '14
-  General Secretary, SUST Science Arena
Dec '12 – Feb '14
-  Sylhet Divisional Coordinator
Science Popularizing Society, Bangladesh
Jan '13 – Dec '14

Recent Projects

- March '24 **Distributed Computing with Flyte and Kubernetes** |  Academic Seminar
 Ansible, YAML, Kubernetes, Flyte, Python
Setup a Kubernetes cluster capable of distributing ordinary Python programs for distributed, parallel computation.
- June '21 – Aug '22 **Propagation Style Analysis for Fake and Real News** Academic Research
 Python, NetworkX, Ray, Docker, Kubernetes, XAI
Scientific individual project on early detection of fake news based on propagation style in Twitter.
- July '22 – Dec '22 **Web Scraping and Topic Modeling for Deutsche Rotes Kreuz (DRK)** DSSG-Berlin
 Python, NLP, Web Scraping, Streamlit
Web scraping and complete NLP analysis of partner websites of DRK.
- Feb '22 – May '22 **Topic Modeling of a Multilingual Survey Corpus of Women's March Global** SWB
 Python, Transformer, LDA, FastText
A comparative topic modeling project for Statistics without Borders (SWB), using Transformer-based (Top2Vec, BERTopic) and traditional (LDA) algorithms.
- April '21 – September '21 **Evolution of Weekly Avg. Sentiment due to COVID** Research Seminar
 Python, Pandas, Numpy, Gensim, SciPy
A seminar project to determine the change in sentiment due to COVID-19 pandemic
- April '21 – Aug '21 **NL2SQL and Table Summarization** Academic Research
 PyTorch, HuggingFace, Transformer, Java
Scientific team project on the translation of natural language to SQL and table summarization
- Dec '20 – July '21 **Fair Recommendation in Research** |  Academic Research
 Python, Django, NetworkX, Docker
Scientific team project to investigate the fairness issues of recommendations engines for scientific articles
- Aug '20 – March '21 **Medical Image Registration using Deep Learning** Academic Research
 PyTorch, UNet, Weights and Bias
Scientific team project MRI image registration using DL.
- June '20 – Aug '20 **Genre Detection of Gutenberg Corpus** |  Course Project
 Python, Gensim, SVM, Ensemble Learning
Genre detection using linguistic features of the highly imbalanced dataset of 19th century fictional literature.

Educational Background

- Present **M.Sc. in Data and Knowledge Engineering (Data Science)**
Otto-von-Guericke University of Magdeburg, Deutschland.
Running CGPA - 1.6
- B.Sc. (Eng.) in Computer Science and Engineering**
Shahjalal University of Science and Technology
Sylhet, Bangladesh
CGPA - 2.1 (German Scale, standardized by Uni-Assist)