SAQIB SARWAR

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k saqibsarwarkhan | 🎓 Saqib Sarwar

"And your Lord never forgets."

Personal Profile

I am a research scholar with Prof. Piyush Rai in Dept. Of Computer Science & Engineering at IIT Kanpur. I work in the area of probabilistic machine learning, deep learning, computer vision, and natural language processing. I am a recipient of the prestigious Visvesvaraya PhD Fellowship. Prior to joining IIT Kanpur, I worked as a Project Associate II on a DST-sponsored project funded by C3iHub. I have completed my Master's and Bachelor's from Dept. Of Computer Engineering at AMU.

Education

Indian Institute of Technology Kanpur *Kanpur, India*
PhD in Computer Science and Engineering *Jan 2023 - Current*
- Recipient of Visvesvaraya PhD Fellowship

Aligarh Muslim University *Aligarh, India*
M.Tech in Computer Science and Engineering *Aug 2019 - Dec 2021*
- Graduated with Distinction
- M.Tech Thesis - "Risk factors classification for Appropriate Screening of Cervical Cancer."

Aligarh Muslim University *Aligarh, India*
BTech in Computer Engineering *Aug 2013 - June 2017*
- Graduated First Division

Lucknow Public School *Lucknow, India*
High School *Apr 2009 - Apr 2010*
- Passed with Distinction
- Specialised in Physics, Chemistry, and Maths with Computer Science

Work Experience

Institute of Engineering and Technology *Lucknow, India*
Project Associate II *Apr 2022 - Dec 2022*
- Designed a visualisation module to perform comparative univariate & bivariate analysis and multivariate correlation between real and synthetic data.
- Implemented state-of-the-art Copula and GAN models for synthetic data generation.
- **Technical Skills:** Python with PyTorch, NumPy, Matplotlib, Seaborn, Pandas, Scikit-learn, Ubuntu Linux, Git, VS Code.
- **Soft Skills:** Time Management, Communication, Presentation skills.

String Social Networks Pvt. Ltd. *Delhi, India*
Android Developer *July 2017 - June 2019*
- Developed News based social media app NewsGallery on MVVM pattern.
- **Technical Skills:** Java, Kotlin, Retrofit, LiveData, ViewModel, Push Notifications, Glide, Coroutines, Git, Android Studio.
- **Soft Skills:** Teamwork, Time Management, Communication.

Academic Experience

Indian Institute of Technology Kanpur *Kanpur, India*
Teaching Assisstant *Jan 2023 - Apr 2023*
- CS253: Software Development and Operations (2024, 2023)
  - Successfully organized an online Machine Learning Competition on Kaggle
- CS771: Intro to Machine Learning (2024, 2023)

Aligarh Muslim University *Aligarh, India*
Teaching Assisstant *Aug 2019 - Dec 2019*
- Network and Embedded Systems Lab

Projects

Hindi to English Machine Translation
Indian Institute of Technology Kanpur

Kanpur, India
Apr 2023

- Developed a Machine translation model based on Transformers to translate English Sentences to Hindi
- Achieved a decent BLEU score of 0.15 for hindi-english translation

Sentiment Analysis
Indian Institute of Technology Kanpur

Kanpur, India
Apr 2023

- Designed and implemented various sentiment analysis models using FastText, RNNs and LSTM.

Plant Leaves Disease Detection and Classification
Indian Institute of Technology Kanpur

Kanpur, India
Mar 2023 - Apr 2023

- Used State of the art Image classification models Resnet, EfficientNet, MobileNetV3 for plant disease detection.
- Created a custom dataset of healthy and unhealthy plant leaves in real life conditions with 8 species and 16 classes.
- Used Visual AI methods Grad-CAM, Grad-CAM++, ScoreCam to explain model performance

Skills

Programming	Python (PyTorch, Pandas, NumPy, Scikit-learn.)
Miscellaneous	Linux, LaTeX, VS Code, Git.
Soft Skills	Time Management, Teamwork, Problem-solving, Logical Thinking, Presentation.
Previous Works	Java, C/C++, Kotlin, SQL, Android Studio, Firebase

Achievements

2023	**Recipient,** Visvesvaraya PhD Fellowship	*India*
2022	**(196/300) JRF,** UGC NET	*India*
2020	**PGT,** HTET CS	*India*
2018	**Rank 28,** JEST (IMSc)	*India*
2017	**Rank 32,** JEST (IMSc)	*India*
2017	**98 percentile,** GATE CSE	*India*

Publications

Simple and Scalable Federated Learning with Uncertainty via Improved Variational Online Newton
Shivam Pal, Aishwarya Gupta, Saqib Sarwar, Piyush Rai
OPT 2024: Optimization for Machine Learning (2024). 2024

Predicting Influent and Effluent Quality Parameters for a UASB-Based Wastewater Treatment Plant in Asia Covering Data Variations during COVID-19: A Machine Learning Approach
Parul Yadav, Manik Chandra, Nishat Fatima, Saqib Sarwar, Aditya Chaudhary, Kumar Saurabh, Brijesh Singh Yadav
Water 15.4 (2023) p. 710. 2023

Qualitative and Quantitative Evaluation of Multivariate Time-Series Synthetic Data Generated Using MTS-TGAN: A Novel Approach
Parul Yadav, Manish Gaur, Nishat Fatima, Saqib Sarwar
Applied Sciences 13.7 (2023) p. 4136. 2023

Certifications

Nov 2022	**Deep Learning: Image Recognition,**	LinkedIn Learning
Nov 2022	**SQL for Data Analysis,**	LinkedIn Learning
Oct 2022	**Data Science with Python ,**	Skillup by Simplilearn
May 2022	**Computer Vision,**	Kaggle
May 2022	**Intro to Deep Learning,**	Kaggle

Interests

Photography	Though I do not have a professional camera, some of my decent snaps can be found on Instagram here.
Altruism	I like contributing in different venues of life. One such example is being a Google Local Guide (Level 9).
Badminton	My interest in this sport began during my first year in bachelors. Since then, I have learned a lot.