Saakshi Kapoor

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Professional Summary

Data Scientist with a strong foundation in machine learning, deep learning, and AI research. Experienced in developing image detection models, recommender systems, and satellite imagery analysis. Skilled in Python, SQL, and data-driven problem solving with a demonstrated ability to translate research into practical, scalable solutions. Adept at communicating insights and working cross-functionally in academic and applied environments.

Core Competencies

- Machine Learning & Deep Learning
- Data Analysis & Visualization
- Recommender Systems
- Object Detection & Computer Vision
- Python, SQL, C++, Java
- Pandas, NumPy, Matplotlib, TensorFlow, OpenCV
- Model Training & Evaluation
- Research & Technical Writing

Education

Ph.D. in Computer Science & Engineering (Pursuing)

UIET, Panjab University, Chandigarh | Dec 2020 – Present

M.E. in Computer Science & Engineering

UIET, Panjab University, Chandigarh | 2015 - 2018 | CGPA: 7.88

B.E. in Computer Science & Engineering

Chitkara University, Baddi | 2010 – 2014 | CGPA: 7.1

Selected Projects

Deep Learning-Based Whale Detection from Satellite Imagery

Python, OpenCV, CNN

- Built deep learning models to detect marine and land mammals from satellite images
- Published in Sustainable Computing: Informatics and Systems

Face Mask Detection Model Comparison

Evaluated and compared object detection models for face mask detection (YOLO, SSD, etc.)

• Presented at ICICC 2022

Obfuscated Attack Detection in Recommender Systems

Python, Data Mining, Collaborative Filtering

- Designed algorithms to detect malicious patterns in user ratings
- Published in Journal of Computing and Information Technology

Professional Experience

Assistant Professor

Chandigarh University, Mohali Nov 2018 – Nov 2020

- Taught core Computer Science courses with a focus on AI and data science applications
- Mentored student projects on Python and Android development

Assistant Professor

ITFT College, Chandigarh Aug 2017 – Oct 2018

- Delivered coursework in software development and data structures
- Led departmental seminars on data analytics and ML trends

Technical Skills

Languages: Python, C++, Java, PHP

Data Tools: Pandas, NumPy, Matplotlib, SQL Server, SQLite **ML & DL Frameworks:** TensorFlow, Keras, OpenCV **Dev Tools:** Android Studio, Spyder, Jupyter, Eclipse

Certifications

- Python with Data Science NPTEL
- Joy of Computing using Python NPTEL
- Foundations: Data, Data Everywhere Google Data Analytics (Coursera)
- Ask Questions to Make Data-Driven Decisions Google Data Analytics (Coursera)

Research Publications

- Kapoor, Saakshi, Mukesh Kumar, and Manisha Kaushal. "Deep learning based whale detection from satellite imagery." Sustainable Computing: Informatics and Systems 38 (2023): 100858.
- Kapoor, Saakshi, Mukesh Kumar, and Manisha Kaushal. "Comparative Analysis of Object Detection Models for the Detection of Multiple Face Masks." International Conference on

- Innovative Computing and Communications: Proceedings of ICICC 2022, Volume 3. Singapore: Springer Nature Singapore, 2022.
- Kapoor, Saakshi, et al. "Detection of Tiny Objects for Maritime Search and Rescue Operations." International Joint Conference on Advances in Computational Intelligence. Singapore: Springer Nature Singapore, 2022.
- Kapoor, S., Gupta, V., & Kumar, R. (2017). A Review of Attacks and its Detection Attributes on Collaborative Recommender Systems. International Journal of Advanced Research in Computer Science, 8(7), 1188-1193.
- Kapoor, S., Gupta, V., & Kumar, R. (2018). An Obfuscated Attack Detection Approach for Collaborative Recommender Systems. Journal of Computing and Information Technology, 26(1), 45-56.