Jagpreet Jakhar

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EDUCATION

University of Sheffield   Sheffield, UK
*M.Sc. Cybersecurity and Artificial Intelligence **Distinction***   *2022 – 2023*

Maharshi Dayanand University   Rohtak, India
B.Tech. Computer Science   *2011 – 2015*

EXPERIENCE

Graduate Teaching Assistant - Big Data Analytics   Jan 2024 – Aug 2024
University of Sheffield   *Sheffield, UK*
- Supporting students in understanding modern scale-out system architectures for processing large, structured and unstructured datasets,how to scale resources for data processing based on workload requirements.
- Provided hands-on support for students working with AWS SageMaker, Athena, and Databricks to perform data analytics queries and implement data mining algorithms at scale.

Graduate Teaching Assistant - Database Design   Jan 2024 – Jul 2024
University of Sheffield   *Sheffield, UK*
- Helping students understand the fundamentals of database management, relational database design, and advanced topics like data warehouses.
- Guided students through the process of designing and implementing relational databases,common challenges related to large and heterogeneous datasets, such as transactional and geo-spatial data.

Graduate Teaching Assistant - Data Modelling and Storage   Sep 2023 – Jan 2024
University of Sheffield   *Sheffield, UK*
- Supported teaching by preparing presentations on topics such as Database Normalisation, providing technical assistance to students during sessions on SQLite and Python integration, and addressing any questions.

Software Engineer   Sep 2015 – Aug 2019
Swig Solutions   *Gurgaon, Haryana*
- Spearheaded the development of a Kiosk Information Management System, increasing operational efficiency and reducing manual inquiries by 40%.
- Developed and deployed responsive, user-centric dynamic web applications using HTML, CSS, and JavaScript and React, enhancing client satisfaction and retention.
- Collaborated with cross-functional teams to deliver customized solutions, meeting 100% of project deadlines while adhering to quality standards.
- Conducted comprehensive code reviews and implemented rigorous testing protocols, reducing post-deployment defects by 25%.

Research Assistant   Sep 2014 – Dec 2014
Maharshi Dayanand University   *Rohtak, India*
- Facial Recognition Neural Networks Project using Convolutional Neural Networks by using Python, dlib (Machine Learning library), NumPy, and OpenCV library.

PROJECTS

Neural ODEs for Domain Wall Analysis | *Python, PyTorch, PySpark, HPC*   Jan 2023 – Sept 2023
- The study focuses on three distinct physical systems: the double pendulum, the Lorenz attractor, and the magnetic domain wall problem.
- The objective is to investigate and compare the predictive performance of Recurrent Neural Networks (RNNs), Long Short-Term Memory networks (LSTMs), and Neural ODEs.
- **Link to Repository**

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL

Technologies: AWS, Git, Docker, Terraform

Libraries: PyTorch, JAX, React.js, Tailwind, Next.js, Django, Flask