KUNAL KHANDELWAL

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SUMMARY

Entry-Level Data Scientist with experience in end-to-end projects, including Web Scraping, data cleaning and analysis using MySQL and Apache Spark, and developing AI solutions with Generative AI and LLMs.

EDUCATION

Indian Institute of Technology Roorkee (IITR) **November 2020 - July 2024**
Bachelor's, Civil Engineering *GPA: 8.186*

PROFESSIONAL EXPERIENCE

ICICI Lombard GIC Ltd **South Mumbai, Mumbai, MH, India**
Associate Data Scientist *July 2024 - Present*

- Led the development of an automated pipeline for Form 29-30 approval in Motor Insurance proposals, integrating OCR and GPT-based language processing.
- Predicted market share in the Motor Insurance domain using PySpark on Databricks, leveraging data extracted through a scalable web scraping pipeline developed with Playwright for automated data collection and cleaning.
- Upgraded the web scraping pipeline using multiprocessing in Python, optimizing CPU utilization and reducing the pipeline's runtime from 2 hours to 10 minutes.
- Conducted anomaly detection in Motor Insurance policy claims using MySQL, identifying irregular patterns such as disproportionately high repair costs for low-priced models.
- Investigated reasons for quote failures and evaluated broker performance across regions, providing actionable insights into market strengths and weaknesses.
- Designed an AI-driven pipeline to streamline claim withdrawals, enhancing efficiency and minimizing manual effort.

The University of Tokyo **Hongo, Bunkyo, Tokyo, Japan**
Research Intern *May 2023 - July 2023*

- Predicted the demand for CFRTP by 2050 in the Wind Energy Sector through rigorous Statistical Models and Data Analysis.
- Led a collaborative effort to develop a Python-based algorithm that predicts the Tensile Strength of recycled CFRP materials, showcasing Programming and Algorithm Design Skills while advancing Sustainable Materials Research.

PROJECTS

Deep Learning based Prediction of Collision at Highway Intersection **Roorkee, UT, India**
TEG, IIT Roorkee *December 2022 - March 2023*

- Developed a model that could analyze driver behaviour with respect to pedestrian safety at pedestrian crossings.
- SSMs based on various vehicle dynamics data, such as speed, acceleration, and lateral position with respect to the lane, were used to identify potential safety issues and classify a driver's behaviour as risky or safe.
- The LSTM algorithm was used to model the behaviour of the vehicle based on the time-series trajectory data.

Deep Learning based Compaction Measurement using Sound Signals **Roorkee, UT, India**
EED, IIT Roorkee *December 2022 - April 2023*

- Developed and trained a Deep Neural Network model to predict soil compaction using sensor data from underground sensors, leveraging a dataset of various soil types and their corresponding compaction levels.

Artificial Intelligence based Photodetection **Roorkee, UT, India**
Team Robocon, IIT Roorkee *September 2021 - October 2021*

- Devised a method to define the path of a moving rover from a live camera feed using the OpenCV library in Python.

SKILLS

Skills: Apache Spark, Databricks, Microsoft Azure, Keras, Natural Language Processing (NLP), Data Science, OpenCV, Data Analysis, MySQL, Data Structures & Algorithms, C/C++, Jupyter, NumPy, Operating Systems, Bash, Computer Networking, Pandas, Power BI, Tensorflow, Python, RDBMS, Mathematics, Machine Learning, Statistics, Postman, API, Azure Functions, GitHub