Bikash Gurung

Liverpool, UK

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EDUCATION

Liverpool John Moores University **Sep 2021 – Sep 2022**
MSc. Artificial Intelligence (Grade – Distinction) *Liverpool, United Kingdom*
Key Modules: Machine Learning, Deep Learning, Accelerated Machine Learning, Enterprise Machine Learning, Advanced Topics in Deep Learning

- MSc dissertation on football player analysis using unsupervised (DBSCAN, KM Clustering) learning
- Mastered fundamentals of SOTA algorithms in machine learning and data science
- Design, develop, deploy and manage machine learning, computer vision and NLP models
- Perform EDA/ETL, statistical analysis, hypothesis testing on tabular and unstructured data

Lovely Professional University **Aug 2015 – May 2019**
B. Tech Computer Science and Engineering (Grade – 2:1) *Punjab, India*
Key Modules: Object Oriented Programming, Data Structures and Algorithms, Database Management System, Python Programming, Discrete Mathematics, Probability and Statistics

SKILLS

- **Programming Languages**: Python, R, Java, HTML, JavaScript, CSS, MySQL
- **ML:** TensorFlow, Apache Spark, Sklearn, RAPIDS, Flask, NumPy, Pandas, Matplotlib, Seaborn
- **Tools**: MLFlow, Docker, GCP, Bootstrap, VSCode, WordPress, GIT

WORK EXPERIENCE

SHL, Gurugram, India **Sep 2019 – Apr 2021**
Data Analyst

- End-to-end development and analysing of computer science assessments by conductive extensive research to design assessment blueprints and test items, aligning them with client requirements.
- Utilized advanced Excel functionalities and CSV data files to analyse and manipulate large datasets, ensuring accurate and reliable data for analysis and reporting purposes.
- Ensured code accuracy by executing rigorous testing on the relevant platforms and conducting meticulous translation reviews, resulting in error-free code deployment.
- Increased team productivity by 33% by conducting comprehensive training meetings and workload assessments for newly hired employees in accordance with the company's best practices.
- Improved the quality of modules by engaging with external subject matter experts in niche IT skills, resulting in an increase in assessment accuracy and higher client satisfaction levels.

Cognizant, Pune, India **Jan 2019 – Apr 2019**
Programmer Analyst Trainee – Internship

- Gained hands-on experience in full-stack development by completing a rigorous internship, which allowed me to apply classroom knowledge to real-world scenarios.
- Worked collaboratively with cross-functional teams, including other developers, business analysts and project managers, to ensure project deadlines and goals were met.
- Developed and tested new website features and functionality, including creating and executing test cases, debugging code and implementing changes based on feedback.

TECHNICAL PROJECT

Bird Species Detection Web Application (GitHub Link)

- Detecting three different bird species using Faster R-CNN and SSD MobileNet.
- Used ReNomTAG to tag 2400 images (800 each), and TensorBoard to visualize/evaluate the performance.

- Flask is used to build the web application, and inference was done using TensorFlow Serving with Docker via the gRPC communication protocol.

Environment Sound Classification (GitHub Link)

- Built a model to detect environmental sounds using MLP and compared it to a Random Forest algorithm.
- Librosa with MFCC was used to analyse data and extract features from 8732 short audio files (time-series dataset) which was labeled into 10 classes.
- MLP model has the highest accuracy of 92.73%, while Random Forest model has 61.11%.

Higgs Boson Detector (GitHub Link)

- Detecting the signals that produce the Higgs boson using the Random Forest and XGBoost model.
- Both models were performed in GPU using RAPIDS and then on CPU.
- CPU is slightly more accurate than the GPU in RF (74.05% vs 74.02%) and in XGBoost (83.45% vs 83.30%).
- GPU performs much faster in terms of training time than CPU, being 177 times faster in RF and 300 times faster in XGBoost.

CERTIFICATIONS

- Learn Python 3 Course – Codecademy
- Structuring Machine Learning Projects – Coursera
- JavaScript: Understanding the weird parts – Udemy