JAYJIT DAS

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Data science professional seeking opportunities to work on projects involving data-driven decision-making using Python and R.

WORK EXPERIENCE

Data Science Researcher, Swansea University 09/2023 – Present

- Conducted comprehensive fine-scale data wrangling, analysis, visualization of spatio-temporal **GPS telemetry** data to understand and report motion patterns and resource selection, using logistic regression.

INSPIRE Fellow, Department of Science and Technology 3/2019 – 8/2022

- Devised and executed a comprehensive strategy for the collection, wrangling, visualization and statistical analysis of **spatiotemporal data** from GPS-enabled satellite collars of wild Asian elephants. This initiative significantly aided the forest department in mitigating human-wildlife conflict (HWC) affecting > 20,00,000 lives.

- Performed ecological and socioeconomic studies in >40 villages resulting in actionable insights to foster coexistence and conservation.

Consultant, United Nations Development Programme 8/2018 – 7/2019

- Successfully developed and commissioned **18 research studies/activities** within a span of 5 months, bolstering snow leopard conservation efforts across four Himalayan landscapes through multi-stakeholder consultations and government liaising.

MACHINE LEARNING PROJECTS

Binary classification: Predicting whether of not a patient should be tested for a disease based on associated medical history.

- Executed comprehensive analysis of medical data using Logistic Regression, XGBoost, Penalised Logistic Regression, and Random Forest models. Additionally, did inferencing and **Variable Importance Plot** to identify predictor variables with the most impact.

Binary classification: Predicting binary outcome – survival / death of Himalayan expedition members.

- Performed a comprehensive analysis of Himalayan expedition dataset, addressing **class imbalance, missing data,** and exploring relationships between expedition characteristics and outcomes.
- Used Logistic Regression and Random Forest models with model explainability to identify impact of predictor features.

Multinomial classification: Predicting type of volcano (multiclass) using low sample size.

- Implemented **bootstrap** resampling instead of traditional training and testing data splits, showcasing a creative approach to handling a relatively small dataset and **SMOTE** upsampling to address class imbalances.

Regression model: Predicting childcare cost in the US counties based on the various features.

- Conducted in-depth exploration of childcare cost across the US counties, uncovering temporal trends, demographic relationships, and complex interdependencies. Used XGBoost algorithm with regularization.

RESEARCH INTERNSHIPS

Exchange Scholar, Freie Universität Berlin, Germany 5/2015 – 7/2015

- Performed experiments to understand the pathways of HIV virology

Scholar, University of Pittsburgh 5/2016 – 7/2016

- Investigated link between immunology and aging (eco-immunology)

SKILLS

Techniques

- Machine learning (regression, classification, ensemble methods)
- Statistical Modelling (linear, non-linear, mixed)
- Hypothesis (A/B) Testing
- Data Analysis
- Data Wrangling
- Data Visualization
- Version Control
- Spatial Analysis / GIS

Tools

- R (tidymodels, tidyverse, terra, shiny)
- Python (scikitlearn, tensorflow, pandas, numpy)
- Git / GitHub
- Power BI
- SQL
- Quarto
- QGIS
- MS Office Suite (Excel, Word, PowerPoint)

Soft Skills

- Effective Communication
- Attention to Detail
- Problem-solving
- Teamwork and Ethics

EDUCATION

University of St Andrews **UK**

MSc Statistical Ecology 9/2022 – 8/2023

Full Tuition Scholarship

Relevant coursework: Advanced Data Analysis, Computing in R, Statistical Modelling using GLM, Datamining and Knowledge Discovery (ML)

Certifications

R for the Rest of Us

Skills: Advanced Data Visualization, Advanced Data Wrangling, Data Analysis and Reporting.

PR Statistics: MOVE04

Skills: Spatio-temporal GPS telemetry data analysis, Advanced Statistical Modelling, GIS

AWARDS

- **2022**: **Full tuition scholarship** by the School of Mathematics & Statistics, University of St Andrews, **United Kingdom.**
- **2019**: Top **1000** students to get Govt. of India's Department of Science & Technology (DST) 5-year INSPIRE Fellowship.
- **2016**: Fogarty grant (National Institute of Health, USA) Research Scholar at the University of Pittsburgh, **USA.**
- **2015**: Top 5 students to be selected for Direct Exchange Scholarship to work at the Freie Universität Berlin, **Germany.**