Shubham Gupta
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Summary

Data Scientist with deep expertise in predictive maintenance and a proven MLOps approach. Skilled in building, deploying, and supporting ML models on large-scale datasets. Delivers actionable client-facing insights, ensuring seamless integration of technical and business needs throughout the project lifecycle.

Education

Master of Data Science (GPA 6.467/7) | The University of Adelaide, Australia, 2019 – 2021

Experience

Data Scientist
Company: InsightFactory.ai, Australia | July 2021 - Current |

- **Spearheaded predictive maintenance initiatives** in mining and rail sectors, resulting in **multi-million-dollar** cost savings through downtime reduction. Optimized client-facing analytics tools for campaigns and resource efficiency.
- **Designed and deployed** end-to-end ML solutions, encompassing data transformation, model building, productionization, and performance monitoring.
- **Architected** a predictive engine failure solution for a major mining client, **reducing** operational **costs by 50%** across their vast fleet.
- Developed an **employee efficiency reporting platform**, facilitating optimized resource allocation and measurable cost reductions.
- Built a **rail break predictive maintenance model**, ensuring proactive intervention, streamlining operations, and **minimizing** costly disruptions by **20%.**
- **Collaborated closely** with stakeholders across the organization, ensuring alignment between ML solutions and key business objectives.

Teaching Assistant
Company: The University of Adelaide, Australia | August 2020 – December 2021 |

- **Technical Instructor for Computer Vision:** Led workshops and practicals, explaining complex concepts to **50+ students** to enhance their understanding and project outcomes.
- **Mentored Students in Programming Fundamentals:** Supported MATLAB and C learning, provided detailed code feedback on assignments, improving performance and technical fluency.
- **Facilitated Collaborative Learning:** Managed course discussion boards, fostered peer support, and resolved technical inquiries, creating a dynamic learning environment.

Research Assistant: Summer Research Scholarship

Company: The University of Adelaide, South Australia | December 2020 – May 2021 |

- Conducted research on abstractive multi-document summarization, incorporating linguistic knowledge for improved text analysis.
- Collaborated with Dr. Wei Emma Zhang as corresponding author on a publication demonstrating in-depth understanding of NLP concepts and research processes.
- **Publications:** Ma, C., Zhang, W.E., Wang, H., Gupta, S. and Guo, M., 2021. Incorporating Linguistic Knowledge for Abstractive Multi-document Summarization. arXiv preprint arXiv:2109.11199.

Research Project: Text to Image using Generative Adversarial Networks (GAN)
Company: Australian Institute of Machine Learning (AIML) | Australia July 2020 – June 2021 |

- Developed generative models for foreground object synthesis (e.g., animals) within complex image scenes using cutting-edge deep learning techniques (GANs, CGANs, StackGANs).
- Achieved successful preservation of background information in image generation, exceeding limitations of previous approaches.
- Collaborated with Dr. Rafael Felix Alves to generate natural images from textual descriptions.

Skills

Programming: Python, PySpark, SQL, C++, MATLAB
Data Analysis & Visualization: Power BI, DAX
Machine Learning: Tree-Based Models, CNNs, GANs, Transfer Learning, Scikit-learn, TensorFlow/PyTorch
Cloud: Azure, Databricks Development: MLOps, Agile, Jira, DevOps
Languages: English (Fluent), Hindi (Fluent), Italian (Beginner)

Awards and Activities

- Volunteer: Meals on Wheels (Kitchen Assistant, Adelaide, Australia (June 2022 – Current)
- Adelaide Graduate Award Recipient (May/2021)
- Research Scholarship – University of Adelaide (December/2020)

References: Available upon request