Anshu Kumar

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PROFESSIONAL SUMMARY

Operations Researcher with experience in solving complex operational problems using AI techniques. Skilled in applying advanced algorithms, optimization methods, and Classical Machine Learning, with a strong interest in emerging AI domains such as Generative AI and Deep Learning. Familiar with MLOps practices, including model deployment and monitoring, and experienced with cloud platforms like AWS. Passionate about leveraging AI to drive innovation, efficiency, and scalability across industries.

SKILLS

Technical skills: Python, SQL, Machine learning, Deep learning, Reinforcement learning, MLOps
Software/Tools: AWS, Airflow, MLFlow, Tensorflow, Pytorch, Git, GitHub
Soft skills: Communication, Adaptability, Team player

EXPERIENCE

Operations Researcher — July 2023 - Present
TCS research — *Bangalore, India*

- **Formulated Adaptive Energy Distribution System:** Designed and implemented an adaptive system for optimizing energy distribution to enhance operational efficiency.
- **Optimized Power Procurement:** Developed an advanced iterative solution for the power procurement problem, enabling scalability that was previously unachievable with traditional MINLP techniques.
- **Mixed Fleet Routing Problem:** Formulated and solved the mixed fleet routing problem using a combination of MINLP, Genetic Algorithms, and Reinforcement Learning methodologies.

AI Intern — March 2023 - June 2023
Myelin Foundry — *Bangalore, India*

- **Video Restoration:** Applied AI-driven video restoration techniques to enhance the quality of old or degraded video footage, utilizing deep learning models to restore clarity, reduce noise, and improve resolution.
- **Prompt Engineering for Dynamic Ads:** Designed and optimized prompts for generative AI models to create dynamic advertisements. Developed strategies to ensure ads were contextually relevant and visually engaging, improving their effectiveness based on user input and real-time data.

Data Scientist Intern — May 2022 - Feb 2023
Harman International — *Bangalore, India*

- **ML-Based Issue Ticket Assignment System:** Developed an AI system using Natural Language Processing (NLP) to automate the assignment of issue tickets to the appropriate teams at Harman, streamlining workflow and improving efficiency.
- **Challenges Overcome:** Tackled key challenges such as handling complex data preprocessing to ensure clean inputs, and interpreting results to continually refine the system, selecting the most effective model from the likes of Decision tree, Logistic regression, SVM and so on for accurate classification and at last selecting the best metric from the likes of Precision, Recall, F-1 score to evaluate our model.

EDUCATION

Indian Institute Of Information Technology — Kottayam, Kerala, India
Bachelor of Technology in Computer Science and Engineering (GPA - 9.03) — *Aug 2019 – April 2023*

Aadarsh Gyanodya Senior Secondary School — Barh, Bihar, India
Secured 91 percent in class 12th — *April 2017 – April 2019*

Dav Public School — Mokama, Bihar, India
Secured 10 CGPA in class 10th — *April 2008 – February 2017*

ACHIEVEMENTS

- Research paper on "Adaptive Energy Distribution" accepted at ISGT Asia 2024 conference.
- Research paper on "Optimized Power procurement" accepted at ACM BuildSys 2024 conference.