

## **Aditya Ghanashyam Ladawa**

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**nerou**

### **Application for Data Science Working Student Position**

Your mission to optimize sewage treatment plant operations through intelligent data analysis aligns directly with my expertise in building production-ready machine learning systems. Currently pursuing MSc Data Science at TU Braunschweig while working as a Research Assistant, I bring hands-on experience in developing automated pipelines that extract actionable insights from complex datasets—precisely what nerou needs for environmental impact optimization.

- Built agent-based biomedical literature analysis systems achieving 94% accuracy in metadata extraction, demonstrating proficiency in handling large-scale data validation and statistical analysis workflows that directly translate to sewage treatment data processing requirements
- Developed end-to-end machine learning pipelines using PyTorch, TensorFlow, and scikit-learn, with production deployment experience through FastAPI and automated CI/CD workflows—technical stack perfectly suited for nerou's decision-support system architecture
- Engineered computer vision systems processing 3D medical scan data with CycleGAN harmonization and Real-ESRGAN enhancement, showcasing ability to extract meaningful patterns from complex environmental datasets similar to treatment plant sensor data
- Created fully automated content generation systems reducing production time by 20x through intelligent orchestration, proving capability to structure independent work and deliver scalable solutions that align with nerou's startup efficiency requirements

My approach prioritizes system durability and measurable output—principles essential for environmental applications where decisions impact both operational costs and ecological preservation. The combination of academic rigor through my Data Science program and practical experience building production systems positions me to contribute immediately to nerou's data science initiatives while gaining valuable startup insights. Ready to apply my technical expertise toward meaningful environmental impact through intelligent sewage treatment optimization.

Warm regards,

Aditya Ghanashyam Ladawa