Biratal Raj Wagle

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EDUCATION

Dartmouth College, Hanover, NH — June 2025
MS Data Science — GPA 4.00

Ashoka University, Sonipat, India — June 2023
BS Physics & Computer Science — GPA 3.68

EXPERIENCE

Data Scientist — 2024 - Present
Dartmouth College — Hanover, NH

- Automated extraction and processing of clinical posturography and wearable sensor data using **Python**, reducing manual workload by 12 hours/week and enabling rapid analysis across multiple clinical studies.
- Developed, evaluated, and deployed advanced **deep learning** models (e.g., Stacked LSTM, WaveNet) for long-term blood glucose prediction in Type 1 Diabetes, improving generalizability across six algorithms; manuscript in review at *Nature*.
- Performed large-scale **statistical analysis** (>10,000 data points) to uncover correlations between sleep patterns and blood glucose management, driving new clinical insights for diabetes self-management.
- Engineered a **RouteLLM**-based AI pipeline for Dartmouth's LLM chat service, reducing per-prompt carbon emissions by up to 60% while lowering costs.
- Launched **JupyterBook** starter guides and documentation for Dartmouth's AI community, accelerating onboarding for 200+ GenAI researchers and spearheading adoption of the **LangChain** framework.

GenAI Engineer Intern — 2025 - Present
River Records — Boston, MA

Engineered a quality assurance pipeline using the **Azure OpenAI Service API** for River Records, reducing AI scribe hallucinations by 30% and significantly improving output reliability for clinical use.

- Leveraged **BERT** models to optimize output accuracy and evaluate performance via key classification metrics (e.g., F1 score), enhancing the trustworthiness of generate nodes.

Data Analyst — 2022 –2024
MitraLab — Sonipat, HR

- Led software development for **MitoSinComp**, a custom **Python** pipeline for automated analysis of mitochondrial structure/function. Integrated **computer vision** and **machine learning** algorithms for foci detection in microscopy images.
- Developed and optimized **cancer tumor segmentation** techniques (UNET) using deep learning and image processing. Worked on high-throughput analysis of histopathology imaging datasets.
- Engineered a machine learning architecture using transfer and ensemble learning to predict biomarkers for oncology purposes.
- Co-authored a peer-reviewed paper. and contributed to documentation and reproducibility standards for research code, facilitating knowledge transfer and collaborative development within the lab.

TECHNICAL SKILLS AND INTERESTS

Technical Skills: Python, SQL, SAS, MATLAB, R, Kotlin, bash, Linux/Unix, Vim, C, C++, Rust
Data & ML Tools: Pandas, NumPy, OpenCV, scikit-learn, PyTorch, TensorFlow, LangChain, NLP, Docker
Big Data & Cloud: Hadoop, Spark, Kafka, MongoDB, AWS, Azure, Docker, Git
Visualization & Reporting: Tableau, Power BI, Data Analysis, Statistical Modelling, Data Visualization, Microsoft Office