Anik De
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EDUCATION

University of Rochester	**Rochester, New York**
Master of Science, Data Science	*Aug 2023 – Dec 2024*

- **40%** Merit Scholarship — GPA: **3.57/4**

SKILLS

- **Language** – Python, SQL, PySpark, R, C, C++, C# | **Libraries** – Pandas, NumPy, Matplotlib, Scikit-Learn, Seaborn, Tensorflow, PyTorch, OpenCV, Scipy, PIL, XGBoost, keras, MLlib, MLflow, Langchain | **Database** – MySQL, Firebase
- **Data Science Techniques** – Image Segmentation, Data mining, ANN, GAN, CNN, Encoders, Decoders, VAE, Transformers. |
- **Tools** – QGIS, Google Earth Pro| **OS**: Linux, Windows | **Scripting**: Bash | **Platforms –** Data Bricks, Hugging Face

EXPERIENCE

GrantAIde (Summer Internship)	**San Francisco, California**
ML/AI Research Scientist	**Jun 2024 – Present**

- Implemented **RAG (Retrieval Augmented Generation)** for a writing assisting tool using **Langchain**
- Successfully designed the database architecture for RAG and integrated with **Firestore database.**
- Implemented **Google Analytics tags** using **Google Tag Manager** for GA4 events tracking.
- Integrated OpenAI's **GPT 4o** and Google's **Gemini Pro and Flash** in the **RAG**

Siemens Healthineers Pvt. Ltd.	**Bengaluru, India**
R&D Engineer	*Jul 2022 – Jul 2023*

- Enhanced AI-driven healthcare solutions by 20% through collaboration with diverse teams, resulting in improved patient care.
- Improved **build analysis, reducing failed builds** by 30% and preventing dead tests, boosting cardio vascular team productivity.
- **Improved CI/CD processes**, resulting in a 20% reduction in staging build failures, ensuring a more stable development environment within 4 months.

Siemens Healthineers Pvt. Ltd.	**Bengaluru, India**
Software Development Engineer Intern	*Jan 2022 – June 2022*

- Automated identification of infrastructure errors, reducing manual effort by 40% and improving accuracy by 25%

RESEARCH ACTIVITIES & LEADERSHIP

University of Rochester Medical Center	**Rochester, New York**
Research Assistant	*March 2024 – present*

- *Working with NIH data for **N3C datasets** with **pySpark** on **characterization of Long Covid***
- *Working with NIH dataset for **N3C dataset** with **pySpark** on **Mental Health characterization of Long Covid***

Georgen Institute of Data Science, University of Rochester	**Rochester, New York**
Research Assistant	*Mar 2024 – May 2024*

- *Enabled **geospatial image retrieval** from specific addresses for comprehensive **geographic analysis** using **YOLOv8** and **QGIS***

DATA SCIENCE COURSE PROJECTS

Prediction of Biological age using 3DCNN Model for Cognitive Impairment	**Mar 2024 – Mar 2024**

- Replicated the paper **Anatomically interpretable deep learning of brain age domain-specific cognitive Impairment.** Used **FreeSurfer** to preprocess the **T1 weighted brain MRI** images (**ADNI, HPC-YA dataset**)

War Damage Estimation using Building Damages from Satellite Imagery	**Nov 2023 – Dec 2023**

- Led a project on **War Damage Estimation** using **Satellite Imagery, employing Google Earth Pro** for pre/post-conflict analysis. Utilized **ResNet, SiameseNetwork Convolutional Neural Networks and QGIS** for precise classification and mapping of building damages in war-affected areas, aiding in efficient damage assessment

Study Of Applicants Applying for master's and PhD Program at U of R	**Nov 2023 – Dec 2023**

- Collaborated with a four-person team to analyze U of R's application data, identifying acceptance patterns and key factors through descriptive, inferential, regression analyses and hypothesis testing.

PROJECTS

Covid-19 CT Image Segmentation	**Apr 2024 – Apr 2024**

- Used **U-Net** as a base model for **image segmentation ground glass, Consolidations, Lungs** and other.
- Used a **V shaped transformer model** to improve accuracy by 15%.
- Used **Vision transformer** model to improve accuracy by 38%
- Used **Swin transformer** model to reduce the overhead of **Vision Transformer** using **patch shifting** and **cyclic shift**

Kaggle Challenges

- Campaign Contributions and Elections in US
- Caravana Image Masking Challenge

Certifications

- Machine Learning Specialization — Jan 2024
- TensorFlow Developer & Deep Learning Specialization — Aug 2020