Rishik Mishra

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EDUCATION

Master of Science in Computer Engineering, **New York University** (09/2022 - **05/2024**)

- Relevant Coursework: Internet Architecture and Protocols, Digital Signal Processing, Machine Learning, Interactive Medical Robotics, Real-Time Embedded Systems, Image and Video Processing

Bachelor of Technology in Computer Science, **Gla University** (08/2018 - 07/2022)

- Relevant Coursework: Introduction to Machine Learning, Big Data, Digital Image Processing, Python Programming, Agile Software Development, Database Management

WORK EXPERIENCE

Software Engineer intern, ScaleAI(02/2024 - Present)

- Contributed to the finetuning and training of large language models

Machine Learning Intern, RadicalX (05/2023 - 08/2023)

- Led a team of 8 interns to design and deploy an Llm based tutoring system
- Developed and fine-tuned chatbots implementing Llama2 and GPT-4 for personalised course generation, resulting in a 30% reduction in response generation time and a 25% improvement in response coherence compared to baseline models.

Computer Vision Intern, KoiReader Technologies (05/2021 - 08/2021)

- Engineered efficient OCR suite, achieving a 13.7% improvement in word recognition accuracy and a 22% reduction in processing time.
- Collaborated with cross-functional teams to deliver projects on time, conducted daily status updates with stakeholders, and identified potential roadblocks to mitigate risks.

Software Engineering Consultant, 360Medtech (02/2020 - 03/2022)

- Developed a machine learning model for esophageal legion detection in pillcam endoscopy, aiding doctors in early cancer diagnosis.
- Implemented a bone segmentation algorithm for 3D prosthetic design, facilitating the creation of customized prosthetics.

SKILLS

Programming Languages: Python, Java, C++, C, Swift, JavaScript.
Data Science and Machine Learning: R, OpenCV, Tesseract, Scikit-learn, NumPy, Pandas, SQL, Tensorflow.
Web Development: Django, HTML/CSS, NodeJS, AngularJS, React Native, XML, Rest API.
Cloud Computing and DevOps: AWS, Azure, GCP, Jenkins, GitLab, CI/CD, Ansible, Linux, Docker.
Data analysis and Management: MongoDB, MySQL, Cassandra, Excel, Tableau, Power BI, NoSQL.

PROJECTS

Early Parkinson's Detection (Publication)

- Reduced cross-examiner variability and time requirements by developing and validating a computer-aided diagnostic algorithm using **Python, TensorFlow, and Keras**

Depression Detection in Social Media Users (Publication)

- Achieved a precision and recall of 96.5% and 97.33% in identifying depressive symptoms in social media posts
- Designed and trained a hybrid Bi-LSTM + CNN model using Python, TensorFlow, and **scikit-learn**

Brain MRI Segmentation and Processing Toolkit

- Reduced brain MRI image segmentation time by 53% from baseline
- Spearheaded the team project built with Python, TensorFlow, **scikit-image** (processing), and **Flask** (backend)
- Designed and implemented an interactive **React UI**, enabling seamless data exchange through REST APIs.

CityQ

- Led team of 3 to develop real-time NYC bike-sharing solution, analyzing 78M+ trips using Python (FastAPI) & **Spark**
- Achieved 20% drop in predicted shortage with ML-driven dynamic pricing & scalable architecture for future expansion

ReSeg

- Collaborated with NYU Video Lab to develop a method for segmenting 3D human images using 2D segmentation and 2D-to-3D reprojection.
- Utilized 3d processing frameworks for creating diverse 2D projections, simulating lighting and camera properties.

CO-CURRICULAR

Graduate Orientation Leader (New York University)
Research Assistant (New York University)
Teaching Assistant (GLA University)
Diversity STEM Career Exploration Program cohort