RONAST SUBEDI

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EXPERIENCE

Graduate Research Assistant Jan 2023 – Present
Florida State University Tallahassee, Florida

- Formulated an active learning method to select informative data from large-scale molecular datasets, achieving over 7% improvement in property prediction tasks against baseline methods (Under review at NeurIPS)
- Collaborated with an interdisciplinary team to clean, analyze, transform, and visualize time-series data of 6 months from cognitive training studies involving over 150 individuals
- Implemented machine learning solutions to predict adherence based on past cognitive training data, achieving 15% improvement in F-score compared to established baselines

Software Development Engineer, Machine Learning April 2021 – Dec 2022
Redev Technology London, UK

- Spearheaded a scalable end-to-end deep learning project for smart city applications to detect people, vehicles, smoke, and fire across diverse geographic and weather conditions
- Contributed to the design and development of data-driven Active Learning pipeline for data annotation, integrating *Coreset* and *Learning Loss* algorithms, reducing data annotation costs by up to 30%

Software Developer Intern May 2019 – Nov 2019
UBL R&D Center Lalitpur, Nepal

- Built and deployed a full-stack web application on AWS EC2 for annotating images from a data stream. Configured AWS S3 to store images and their labels
- Deployed a pre-trained image recognition model on AWS SageMaker to facilitate the annotation process, increasing annotation speed from 40 to 70 images per hour

SKILLS

Programming Language	Python, C, C++, Java, JavaScript, SQL
Web Framework	Django, Flask, ReactJS, NodeJS
ML Framework	PyTorch, TensorFlow, Keras, scikit-learn, OpenCV, Pandas, NumPy, SciPy, Matplotlib
Tools	Linux, Git, Docker, AWS, GCP, LaTeX

EDUCATION

MS in Computer Science/Thesis(4.0 GPA), Florida State University Jan 2023 – Present
Courses: Advanced Algorithms, Advanced Data Mining, Weakly Supervised Machine Learning, Data Science, Concurrent Parallel and Distributed Programming

Bachelor's in Computer Engineering, Institute of Engineering, Pulchowk Campus Nov 2016 – April 2021
Courses: Data Structures and Algorithms, Software Engineering, Object-Oriented Analysis and System Design, Data Mining, Distributed Computing, Database, Probability and Statistics, Artificial Intelligence, Information Retrieval, Computer Networks

PROJECTS

Academic Program Management Software

- Designed a database schema and developed a full-stack web application to manage over 10K records of programs, faculties, and students
- Automated document generation tasks, reducing weekly manual workload by up to 4 hours

Web-based tool for Image Super-Resolution

- Generative AI powered full-stack web tool to enhance the resolution of low-resolution images by a scale factor of 4

Chat Application

- Built a client-server-based chat application using connection-oriented TCP sockets, supporting layers 2 and 3 of the OSI Network Model, achieving latency consistently below 1 second

ACHIEVEMENTS

- Published 6 research papers(55 citations) in Journals and Conferences [Link]
- Secured first place in the EndoVis Fetreg challenge at MICCAI 2021 [Certificate]
- Attended PRAIRIE MIAI Artificial Intelligence Summer School, 2021, with a full scholarship [Certificate]