Anujay Ghosh

Jersey City, NJ - 07306
+1-934-263-1593 anujay.ghosh@stonybrook.edu linkedin.com/in/anujayghosh/ https://github.com/anujayghosh

EDUCATION

Stony Brook University (SUNY) **Jan 2023 - Dec 2024**
Master of Science, Computer Science
- **Coursework:** M.S. Thesis in Accessibility using AI(LLMs), Computer Vision, Data Science, Visualization, Databases, Probability and Statistics

University of Mumbai **Aug 2016 - Nov 2020**
Bachelor of Engineering, Computer Engineering
- **Coursework:** Machine Learning, AI, NLP, Operating Systems, Computer Networks, Software Engineering

SKILLS

- **Technical Skills:** Python, JAVA, Spring Boot, SQL, Oracle, JavaScript, AWS, HTML, CSS, XML, NoSQL
- **Software and Frameworks:** Pytorch, TensorFlow, Keras, numpy, scikit-learn, scipy, GitHub, Cursor IDE, REST APIs, DB2, Apache Spark, Hadoop, Slack, Jenkins, VS Code, Postman, BASH
- **Software Development:** Linux, SDLC, Agile, Jenkins, DevOps, CI/CD, Scrum, uDeploy, JIRA, Rally, Confluence

WORK EXPERIENCE

Dept. of Computer Science - SUNY at Stony Brook **Aug 2023 - Dec 2024**
Graduate AI Research Assistant
- Developed Savant, an assistive technology powered by large language models (LLMs) to enable uniform computer interaction for blind users across diverse applications, automating screen reader actions through MS UI Automation and advanced NLP techniques in Python, achieving 90% accuracy through natural language commands
- Enhanced LLMs by implementing fine-tuning and few-shot learning to interpret natural language commands, automating the correct sequence of screen reader actions in an application-agnostic solution, resulting in improved user satisfaction and efficiency
- Conducted user studies with 11 blind participants, demonstrating significant improvements in interaction efficiency (4x faster) and usability (3x higher SEQ score) compared to standard screen readers.

Accenture | *Software Engineer* **Jan 2021 - Jan 2023**
- Improved Cigna's Enrollment strategy backend with Java Spring Boot, AWS (S3, CloudWatch, VPCs), and REST APIs. Achieved a 30% scalability boost in application development and 40% faster response times.
- Reduced client's AWS costs by 30% while maintaining product quality through EC2 reserved instances, using Python 3 for storage, CloudWatch for monitoring, and VPCs for network isolation and reliability, while also leveraging AWS Lambdas
- Collaborated in a 5-member cross-functional Agile development team, utilizing Java, Python, RESTful APIs, SQL, and AWS services. Achieved a 15% productivity boost and on-time, on-budget delivery of 4 major projects.

PROJECTS

Elephantana: Multi-Faceted RAG Chatbot with Advanced Memory Management and CRUD Capabilities
- Implemented a RAG-based LLM chatbot system that handles informational queries and action commands with production-level system design.
- The chatbot utilizes Google Gemini for natural language processing and integrates with Redis, Pinecone, and Supabase for data storage and retrieval.

Leveraging Language Models for Predictive Analytics: Enhancing Corporate Ratings
- Implementing Language Models (LLMs) and Data Science methodologies to analyze data from 3500 companies.
- Collaborated closely with Broadridge Financial Solutions to utilize graph neural networks to identify areas for improvement within companies.
- Generated actionable recommendations to enhance company ratings relative to industry peers and produced concise summaries outlining strategic pathways for improvement.

Class-agnostic counting using a similarity-aware framework
- Extending the work using CNN and Transformers present in BMNet, which involves counting instances of an object in a query image given a few exemplars.
- The trained model achieves state-of-the-art performance on the CAC dataset FSC147 by leveraging bi-linear matching networks, bounding boxes, and dot annotations to denote exemplars.

Significance Scoring and Recommendation System for Businesses in New York City
- Formulated data-driven scientific scores to quantify the cultural significance of over 45,000 NYC businesses using a novel scoring algorithm.
- Analyzed datasets to optimize scoring methodologies, achieving a 15% improvement in search enhancement and discrimination between independent businesses and national chains.
- Conducted thorough analysis to validate the optimized scoring system's effectiveness in quantifying businesses' impact on New York City's cultural fabric, aligning with over 92% accuracy with external sources.