Rohan Sawant

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Education

Boston University — Boston, MA
Masters in Artificial Intelligence, 3.63 GPA — *Sept. 2022 – May 2024*
Relevant Courses: Image and Video Computing, Natural Language Processing, Machine Learning

Thadomal Shahani Engineering College — Mumbai, MH
Bachelors in Computer Engineering, 8.87 GPA — *Aug. 2018 – May 2022*
Relevant Courses: Data Structures and Algorithms, Computer Networks, Database Management

Technical Skills and Certifications

Certifications: **AWS Solutions Architect Associate, AWS Cloud Practitioner**
Developer Tools: Git, Docker, LLMs, Google Cloud Platform, GPT-4, OpenAI, Prompt Engineering, CUDA, Kafka
Libraries: pandas, NumPy, Matplotlib, PyTorch, TensorFlow, Langchain, OpenCV
Additional Skills: Experience with SQL, PowerBI, Retrieval Augmentation and Hugging Face

Experience

Data Science Intern — June 2023 – Aug 2023
Phoenix Innovations LLC — *Atlanta, GA*
- Pioneered a project to architect and develop a cutting-edge data pipeline using machine learning technologies to optimize incoming sales domain datasets. This initiative enhanced sales and supply chain efficiency by 20%, by carefully selecting and tuning machine learning models.
- Assisted in integrating OpenAI GPT-3.5 endpoints for effective NLP analysis, and enhanced our ability to derive insights from unstructured data.
- Orchestrated the development of AutoML dashboards utilizing the PyCaret framework, collaborating closely with a team of 15 people, leading to a 10% decrease in model deployment timelines and an enhancement in operational decision-making precision.

Graduate Teaching Assistant — Sept 2022 – May 2024
Boston University — *Boston, MA*
- Led instructional support for a data science course over 4 semesters, incorporating essential concepts such as A/B testing and statistical inference, which significantly increased student engagement.
- Designed and refined over 10 types of assignments and exams, challenging students to apply analytical skills and deepening their understanding of data science.
- Managed the assessment process for a class of 150 students, establishing fair and comprehensive criteria to ensure detailed evaluation and constructive feedback across four semesters.

Cloud Engineering Intern — Jun 2021 – Oct 2021
Ernst and Young — *Mumbai,MH*
- Developed a cloud-based ML strategy for BFSI and Pharma sectors using AWS, focusing on key use cases like personalized medicine and fraud detection.
- Implemented MVPs using Agile methodology for rapid iteration, enabling predictive modeling in medicine and finance.

Personal Projects

Cross-Lingual QA Models in Marathi | *Master's Thesis* — Sept 2023 – Present
- Focusing on the enhancement and adaptation of cross-lingual QA models for the Marathi language using datasets like XQuAD and TyDiQA.
- Performing rigorous translations and accuracy evaluations to refine and benchmark baseline models, achieving up to 50% F1-score on zero-shot evaluation using multilingual LLMs.
- Applying advanced training methodologies on prominent language models, including mBERT, XLM-RoBERTa, Cohere, and Bloomz-560M to specialize their functionality for Marathi language comprehension and question-answering tasks.

False Assumptions in Long-tail Questions with Synthetic QA Datasets | — Mar 2023 – Feb 2024
- Created a specialized dataset of over 1500 questions leveraging Wikidata and perturbed questions from HotpotQA to capture the long tail reasoning in language models under false assumptions.
- Conducted comprehensive experiments on large language models such as LLAMA 2, PALM-2, and GPT-4, assessing their vulnerability to questions with misleading premises.
- *This research has been submitted for review at the ACL journal, showcasing its relevance and contribution to the field.*
- Designed evaluation metrics to quantify the reliability and reasoning capabilities of tested models.

Enhancing Breast Cancer Diagnosis with SVM and KNN | *IJRASET* — Jun 2020 – Aug 2020
- Developed a machine learning model for breast cancer diagnosis, reaching 98% accuracy, and enhancing early detection.
- Published research in the *2020 IJRASET* journal, detailing methodologies and implications for healthcare diagnostics.