Atharva Pandkar

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Professional Summary

Machine Learning Engineer with a track record in leading AI projects to enhance operational efficiency and user engagement. Eager to leverage deep AI expertise in a dynamic environment to drive innovation and impactful solutions.

TECHNICAL SKILLS

Languages: Python, C/C++, R, Java, JavaScript, SQL.
Framework/Libraries: TensorFlow, Pytorch, Scikit-Learn, Keras, Pandas, NumPy, NLTK, Spark.
Tool/Technologies: AWS, Git, CI/CD, HuggingFace, CUDA, Cloud DevOps, Deep Learning.
Certification: Machine Learning (MLOps), Db2 Relational Database Administration, Web Developer Boot Camp.

EXPERIENCE

Machine Learning Intern, HER Heard, Cambridge, MA,   **January 2024 – April 2024**
- I developed a women's health chatbot, compiling a vast knowledge base on topics such as reproductive health and menopause, leading to a 40% increase in user engagement and support accessibility.
- Optimized Large Language Model (LLM) with vector embeddings achieving a 40% enhancement in user interaction, as demonstrated by positive feedback from the user satisfaction survey.
- Spearheaded transition from Flutter to Node.js/Express.js, leveraging Google Cloud for database optimization, resulting in enhanced user engagement and 30% improvement in data-driven analysis.

Machine Learning Intern, Intelligence Techsol Pvt. Ltd., Pune, India   **March 2021 – March 2022**
- Developed a robotic process automation (RPA) tool with UiPath for efficient data extraction from invoices using pattern recognition and computer vision, cutting manual entry by 80%.
- I developed a pose estimation application achieving 95% accuracy in skeletal mapping for varied activities like studying and sports, by harnessing the VGGNet model. This innovation enhanced the technique of over 500 users through real-time posture feedback, significantly improving their physical health and performance.

RESEARCH

A System and Method for Music Recommendation, Patent | Recommender Systems   **December 2021 – August 2022**
- Development of an algorithm for music recommendations based on listen time, performing feature engineering and identifying patterns in trendy music users, resulting in a 40% reduction in recommendation time.
- Pioneered a transformative algorithm, analyzing audio data achieving a 25% enhancement in user engagement.

Solving 2048 a Detailed Comparison of Strategies   **July 2020 – November 2020**
- Revolutionized '2048' game dynamics with Python, integrating reinforcement learning and Monte Carlo Tree Search, culminating in a performance optimization that garnered a publication from extensive reward strategy analysis.

EDUCATION

Northeastern University, Boston MA, *Master's in Artificial Intelligence*   **September 2022 – December 2024**
Relevant Courses: Foundation of Artificial Intelligence (AI), Algorithms, Programming Design Paradigm, Machine Learning (ML), Computer Vision, Natural Language Processing (NLP), Human Computer Interface in Artificial Intelligence (AI)
Teaching Assistance positions: Provided guidance to 70+ students in Office hours, lab sessions and graded assignments.
- **DS 4400 – Machine Learning and Data Science** (Jul 2023 – Sept 2023): Clustering, Regression, Bayesians Methods
- **CS 6120 – Natural Language Processing** (Sept 2023 – Jan 2024): Information Retrieval, HMM, Classification

MIT WPU, Pune MA, *B. Tech in Computer Science*   **March 2018 – June 2022**
Relevant Courses: Object Oriented Programming (OOP), Artificial Intelligence (AI), Databases (SQL), Data Science, Distributed Cloud Computing, Software Engineering, Statistical Analysis, Machine Learning (ML)

PROJECTS

Benchmarking LLM Chatbot: Innovations in Legal Assistance, PyTorch | Generative AI | LLM   **July 2023 – September 2023**
- Developed a large language model (LLM) chatbot, scraping the LTB website for corpus construction and data wrangling into key-value pairs. Implemented a Retrieval-Augmented Generation (RAG) pipeline and utilized vector embeddings for enhanced query efficiency, achieving a 30% faster response time.
- Analyzed GPT-3, GPT-2, and Llama's 2b performance, optimizing it based on GLU scores to boost user satisfaction.

Multimodal Gesture Recognition System, TensorFlow | Deep Learning | RNN | Neural Network | NLP   **January 2023 – May 2023**
- Led the integration of vision and gesture recognition technologies using the ResNet 106, achieving 98% F1-score in hand gesture predictions for English alphabets and 76% in language recognition tasks.

Social Media Influencer Marketing, Markov Chains | EDA | Data Analysis | Scikit-Learn | Python   **January 2022 – May 2022**
- Led team in crafting a social media analysis tool, gathering 10,000+ Instagram profiles via API. Utilized graph neural networks, Gephi for exploratory data analysis, and Python for Markov Chain-based ranking algorithms.