Parisa A. Mahdavi

ML Engineer

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With 3+ years of experience in developing ML&NLP algorithms from data preparation to deployment, passionate about tackling innovative business problems by applying data-driven solutions through cross-team collaborations.

EXPERIENCE

Machine Learning Developer | Done.Tech
2021 - 2023

- Collected and annotated 1800+ rows of textual data from various sources for a movie search and recommendation system, then cleaned and processed them using Excel and Python libraries, ensuring accuracy and reliability.
- Developed a BERT-based language model in PyTorch to understand user's query in the field of NLU, achieving over 90% F1-score for intent classification joined with slot filling tasks in movie-related queries.
- Constructed complex queries for Elasticsearch engine, delivering personalized and relevant results based on contexts extracted from user's searches using NLP models.
- Deployed ML models into production via Rest APIs and docker, enabling a virtual assistant on +300K smart TVs, resulting in a 10% increase in user engagement.
- Delivered and documented testable and readable Python code for AI services by creating flowcharts using Figma, facilitating collaboration and further development for a fast-paced Agile startup environment.

Research Assistant | Ferdowsi University
2017 - 2020

- Researched Machine Learning algorithms, their applications, workflows, and Optimization Techniques.
- In-depth study of FPGA architecture including logic blocks, routing, and parallel computing concepts.
- Optimized a CNN for Xilinx FPGAs using approximate multipliers and quantization, achieving a 50% runtime reduction and only a 4% accuracy loss on the MNIST dataset.

PROJECTS

- **Fake Tweets Prediction**: Applied data preprocessing techniques with Python's libraries, trained an LSTM with attention in Keras, achieving 80% accuracy in fake tweet detection. ([Link](#))
- **Content tagging with NLP**: Developed a HuggingFace transformer model for 900k Stack Overflow text data to categorize into multiple labels with a 74% F1-score.([Link](#))
- **Unsupervised Clustering**: Developed K-means clustering on GPT Reddit data, used Bert for vectorizing data instead of TF-IDF, raising the Silhouette Coefficient from 0.126 to 0.378. ([Link](#))

EDUCATION

M.Sc. Electrical Engineering | Ferdowsi University
2017 - 2020

SKILLS

Programming Language: Python, SQL, R.
Frameworks and Tools: PyTorch, TensorFlow, scikit-learn, Flask, Docker, Azure, GCP, LLM(Tranformer-Based models)
Agile software development, Expert in Git for version control.

CERTIFICATION

Natural Language Processing Specialization | DeepLearning.AI
Azure AI Fundamentals | Microsoft