

MOHAMAD AHMADI

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Profile

Passionate data scientist with over 5 years of experience, specializing in crafting intricate end-to-end machine learning models. Adept at leveraging a strong mathematical foundation to explore the latest tech trends, including language models, image models, information retrieval, text mining, recommendation systems, predictive modeling, fraud detection, and big data processing.

A track record marked by successful projects, demonstrating strong teamwork skills through collaboration with diverse teams, including healthcare workers, medical specialists, market experts, and cross-functional professionals from various backgrounds.

Skills

Languages: Python, Java, SQL, C/C++, R

Python Packages: Pandas, Torch, Tensorflow, Keras, Transformers, Scikit-Learn, PySpark, OpenCV, Matplotlib, Plotly, Dash

Developer Tools: Git, PowerBI, Jira, Docker, Kubernetes, Apache

Cloud Services: Azure, AWS

Machine Learning and Deep Learning Algorithms: Decision Trees, Random Forest, XGBoost, CNNs, RNNs, GANs, LSTM

NLP Algorithms: Word Embeddings, Named Entity Recognition, Sentiment Analysis, Text Classification, Topic Modeling, Text Generation, Transformer Models

Databases: Microsoft SQL Server, MySQL, SQLite, DynamoDB, MongoDB

Language Models: OpenAI GPT, BERT, LaMDA, LLaMA

Image Models: Stable Diffusion, DreamBooth, Realistic Vision

Soft Skills: Communication, Teamwork, Leadership, Creativity

Experience

Bluecouch AI

January 2022 – Present

Machine Learning Engineer

Vancouver, BC

- Led a team in designing and developing a virtual assistant powered by **GPT-3** language models to provide expert-level answers and advice to insurance customers.
- Employed query engineering to optimize the language model input and improve the relevance and accuracy of responses provided by the virtual assistant by **30%**.
- Collaborated with cross-functional teams to integrate the virtual assistant seamlessly into the company's customer support infrastructure.
- Contributed to improving customer satisfaction and engagement by providing timely and informative responses to insurance inquiries.
- Developed and deployed fraud detection algorithms with an accuracy of **88%** to identify suspicious activities and potentially fraudulent claims in insured data.
- Leveraged machine learning techniques, such as anomaly detection and predictive modeling, to detect patterns indicative of fraud.

AI for Public Health

September 2022 – September 2023

Artificial Intelligence Researcher

Toronto, ON

- Curated a balanced multi-class dataset for **cyberbully detection** by applying self-training to existing limited labeled data.
- Introduced and developed an ensemble self-training algorithm to address the issue of data reliability, improving model robustness and accuracy by **35%**.
- Modified self-training algorithm to be compatible with powerful language models such as BERT.
- Pioneered a novel two-phase multi-label classification approach that yielded a remarkable **10%** enhancement in accuracy over conventional multi-label classification methods.
- Collaborated with social media experts for data verification, resulting in a highly reliable labeled dataset.

Parhoon Nouandish Pars (Naptech)

April 2018 – July 2021

Machine Learning Researcher

Tehran, Iran

- Designed and implemented machine learning models to predict customer behavior in the banking industry, including churn prediction, customer lifetime value, and cross-selling opportunities.
- Utilized clustering analysis techniques to segment customers and products in the market, enabling targeted marketing and personalized product recommendations.
- Developed a scalable and efficient market segmentation system, enabling the company to optimize marketing campaigns and increase customer engagement by **10%**.
- Designed and implemented an unsupervised fraud detection system using anomaly detection algorithms to identify suspicious activities in customer data, achieving an F1-score of **86%**.
- Engineered the neural network architecture and hyperparameters to optimize the model's performance on imbalanced Medicare datasets.

Education

University of Regina

Master of Science in Computer Science

Regina, SK

Amirkabir University

Bachelor of Science in Computer Science

Tehran, Iran