MOHAMAD AHMADI

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PROFILE

Highly motivated data scientist specialized in developing sophisticated end-to-end machine learning models to uncover patterns from complex data. Strong mathematical background with a passion for leveraging advanced technologies to drive data-driven decision-making. Proven track record of successful projects.

EXPERIENCE

- **Machine Learning Engineer** — Jan 2022 – Present
  Bluecouch AI — Vancouver, Ca
  - Designed and developed 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 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.
- **Artificial Intelligence Researcher** — Sep 2022 – Sep 2023
  AI for Public Health — Toronto, Ca
  - Curated a balanced multi-class dataset for cyberbully detection by applying self-training to existing limited labeled data.
  - Addressed data imbalance and scarcity challenges in cyberbullying datasets, providing insights and recommendations for future research.
  - 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.
- **Machine Learning Researcher** — May 2018 – July 2021
  Parhoon Nouandish Pars (Naptech) — 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.
  - Evaluated and validated the performance of the unsupervised fraud detection system, achieving high precision in identifying fraudulent claims and minimizing false positives.
  - Developed a neural network-based fraud detection model to detect fraudulent Medicare claims in healthcare data.
  - Engineered the neural network architecture and hyperparameters to optimize the model's performance on imbalanced Medicare datasets.

EDUCATION

MSc in Computer Science
University of Regina — GPA: 4/4

BSc in Computer Science
Amirkabir University — GPA: 3.65/4

EXPERTISE

- **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

SKILLS

- **Languages:** Python | SQL | C/C++ | Java
- **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
- **Language Models:** OpenAI GPT | BERT | LaMDA | LLaMA
- **Image Models:** Stable Diffusion | DreamBooth | Realistic Vision

PUBLICATION

- "Bandwidth Prediction in 5G Mobile Networks Using Informer", *2022 13th International Conference on Network of the Future (NoF), Ghent, Belgium, 2022, pp. 1-9*
- "5G Network Slice Type Classification using Traditional and Incremental Learning", *NOMS 2023-2023 IEEE/IFIP Network Operations and Management Symposium, Miami, FL, USA, 2023, pp. 1-5*
- "Self-Training for Cyberbully Detection: Achieving High Accuracy with a Balanced Multi-Class Dataset", *(Accepted)*