Parham Moradi

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Skills

Programming & Frameworks: Python, SQL, TensorFlow, scikit-learn, PyTorch, Pandas, Seaborn
Data & AI Techniques: Reinforcement Learning, Optimization, Data Modelling, Predictive AI, APIs
Tools & Technologies: Docker, Kubernetes, CI/CD, SQLite, AWS, Git
Operating Systems and subsystems: Ubuntu, WSL, Windows

A strategic problem-solver who excels at translating mathematical concepts into practical solutions.

Education

M.Sc. Management and Data Sciences — Waterloo, Canada
University of Waterloo — Sept.2021 - Feb.2024

B.Sc. Computer Science and B.Sc. Electrical Engineering — Tehran, Iran
Sharif University of Tech — Sept.2016 - Sept.2021

Projects

Data-Driven Patient Scheduling with AI and RL

Master's Thesis — University of Waterloo

- Built the **optimized quantitative** patient scheduling model.
- Checked the robustness of the algorithm using **sensitivity analysis**.
- Analyzed Canadian hospitals' datasets and estimated decision-making policies using **Python**, with data processed in JSON and CSV formats.
- Built a **predictive AI-based** patient scheduler to test hypotheses, improving the total waiting times by 30%.
- Used **Mathematical Optimization, Reinforcement Learning (RL)** and **Pandas** to improve decision-making performance by 70%.

Building a Scalable Machine Learning API — GitHub

- Built a user-friendly **ML API** that enables non-expert users to **upload datasets, train models, save best-performing models, and receive predictions and evaluation scores.**
- Saved the best-performing model to **SQLite database**.
- Validated endpoints using **Postman and cURL.**
- **Dockerfile** ensures seamless local deployment.
- Developed **Kubernetes** deployment and service YAML files.
- Deployed the app locally using **Minikube**.
- README.md with Docker setup instructions, API usage examples, **CI/CD pipeline guidance**, and Terraform deployment details.

Rainfall Classification and Accuracy Analysis — IBM Course

- Analyzed patterns in rainfall dataset and **visualized** key features.
- Five machine learning algorithms were implemented including **Linear and Logistic Regression, K-Nearest Neighbors, Decision Trees, and SVM** each achieving over 80% **accuracy**.

Experiences

Database and Software Design

TA at University of Waterloo

- Conducted tutorials, labs, and evaluated projects.
- Covered AWS, React, Node.js, and MySQL.

Machine Learning with Python

IBM Certificate

- Linear and Logistic Regression, Sigmoid Function, Gradient Descent, SVM, Snap ML, Grid Search, Clustering and K-Means.
- Used Python Libraries such as TensorFlow, PyTorch, and Pandas.

Coursework

- Completed courses in Machine Learning, Artificial Intelligence, and Big Data Analytics.
- Covered key algorithms and techniques including Quantitative Analysis and forecasting, NLP, Decision Trees, Gradient Descent, Neural Networks, and Deep Learning.