Mostafa Rezaee

Ph.D. in Data Science

Data Scientist | ML Engineer | AI Scientist

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SUMMARY

- Aaa
- Bbb
- My GitHub Repo Lists: LLMs, AI Engineering, ML Engineering, Recommender Systems, Causal Inference, A/B Testing, Physics & Engineering, Personal Branding.

EXPERIENCE

Machine Learning Engineer

Stealth Startup *May 2024 - Present*

- Deployed scalable ML models as REST APIs using FastAPI and Docker, integrating PostgreSQL for persistent prediction storage.
- Implemented real-time monitoring with Prometheus and Grafana, tracking API performance, model predictions, and system health.
- Automated ML workflows with CI/CD pipelines, enabling seamless model updates, containerized deployments, and continuous integration using GitHub Actions.

Data Scientist

SaveBirds *Sep 2019 - Apr 2024*

- 99% reduction in data preparation and analysis time—cutting it from 90 days to just 1 minute—by developing the SaveBirds.app, enabling ecologists and conservationists without coding skills to access 56 years of 800 bird species from 300,000 locations across North America.
- 99% reduction in atlas creation time—cutting it from 180 days to under 10 hours—by creating the Bird Atlas Generator (BAG), making it accessible without advanced GIS expertise.
- Automated key biodiversity metrics calculation enabling rapid, data-driven conservation decisions for 40,000 Protected Areas and supporting the $75 billion wildlife-watching industry.
- Supported 7 projects involving 10 researchers from 6 institutions.

AI Scientist

Sanofi *Jun 2022 - Aug 2022*

- Boosted Gait Speed Accuracy: Improved accuracy by 25% (70% to 88%), reducing MAE from 0.12 m/s to 0.098 m/s. (Technology: LSTM, Accelerometer Data).
- Refined Step Segmentation: Increased precision in distinguishing left vs. right steps from 86% to 94%, reducing misclassification rates by 57% (14% to 6%). (Technology: Random Forest, SVM, Signal Processing)
- Minimized False Positives in Sway Detection: Improved accuracy in detecting sway by 46% (65% to 95%), reducing false alarms from 22% to 15%. (Technology: Bayesian Filtering, Adaptive Thresholding, Time-Series Anomaly Detection)
- Optimized Data Pipeline: Accelerated preprocessing of 1.2 million accelerometer data points, reducing processing time by 45% (9.2s to 5.1s). (Technology: Apache Spark, Feature Engineering)

Lead Data Scientist & Deputy Director of Research and Technology

Farabi Institute *Sep 2013 - Aug 2019*

- Led the provincial implementation of a nationwide data digitization project, transforming the educational ecosystem for over 1,000,000 students, 40,000 classrooms, and 76,000 teachers across 40 districts.
- Supervised a team of 100+ data analysts directly reporting to me, ensuring standardized, high-quality data collection and analysis at scale.

- Enhanced data accuracy by 40% and established real-time updates, allowing instant visibility into changes in student, teacher, and school profiles.
- Applied advanced regression, classification, and time series analyses to derive actionable insights, guiding data-driven policy decisions for senior authorities.
- Developed an automated alert system that identified significant performance shifts, prompting timely interventions and continuous improvement throughout the education system.

Adjunct Professor of Machine Learning and Computational Studies
Payame Noor University (PNU) *Sep 2013 - Aug 2019*

- Empowered 600+ students over six years by teaching a 3-credit Computer Programming course each semester, covering Python and Machine Learning to 50+ senior and master's students per class.
- Supervised 100+ senior students' final projects, designing specialized Machine Learning projects that laid the foundation for their master's research and careers in AI.
- Shaped the future of AI professionals by inspiring students to integrate Machine Learning into their master's projects, fostering a new generation of ML practitioners and researchers.

EDUCATION

Data Science, Ph.D. | *Bowling Green State University, Ohio* **2024**

- My Ph.D. Project: https://savebirds.app

SKILLS

Data Science A/B Testing, Causal Inference, Recommender Systems

LLMs & Generative AI Transformers, OpenAI, Ray Data, LangChain, RAG

AI Engineering FastAPI, Streamlit, Gradio, HuggingFace, ONNX Runtime, Triton, W&B

ML Engineering Docker, Kubernetes, MLflow, Kubeflow, Apache Airflow, SageMaker

Deep Learning Computer Vision, Natural Language Processing (NLP), HuggingFace, PyTorch, TensorFlow

Machine Learning scikit-learn, caret

Cloud Platforms AWS, Azure, Google Cloud

Time Series Analysis Transformers, TCN, Prophet, LSTM, Statsmodels, ARIMA, SARIMA, TSA

Big Data Apache Spark, Hadoop, Apache Hive, Presto, Apache Flink, Dask

Programming Languages Python, SQL, R, C++, FORTRAN