

Mohamed HANNANI, Machine Learning Engineer

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SUMMARY

Machine Learning Engineer with proven track record in developing and deploying high-performance ML models. Proficient in Python, R, and PyTorch. Expert in data preprocessing, feature engineering, and model evaluation, developed predictive models with over 90% accuracy. Passionate about exploring cutting-edge techniques and leveraging AI to solve complex problems. Seeking impactful opportunities to apply ML expertise and drive innovation in a dynamic environment.

EXPERIENCE

Data Engineer & Scientist

Aug 2022 – July 2023, Casablanca, Morocco

Indatacore

Leader in digital industry based on artificial intelligence and Deep Machine Learning technologies.

- Led team to refine data extraction from scanned bills, cutting processing time by 30% and boosting system accuracy by 15%.
- Collaborated with software engineers to deploy scalable machine learning models for SKyID using Docker and Kubernetes.
- Implemented cutting-edge OCR solutions, achieving a 95% accuracy rate in verifying bank check validity and eliminating manual verification needs.
- Strategically designed data cleaning and preprocessing pipelines for internal signature data, resulting in a remarkable 95% enhancement in data integrity and accuracy.
- Applied algorithms for automatic extraction of vital information from bill documents, achieving an impressive 98% accuracy rate and reducing manual effort while enhancing data processing efficiency by 70%.

Skills: Optimization AWS NLP MLOps PyTorch Transformers LLMs FastAPI Data Pipeline XML JSON

Intern Data Scientist

Mars 2022 – Aug 2022, Casablanca, Morocco

Indatacore

- Achieved a notable 97% accuracy in anti-spoofing system, substantially mitigating the risk of unauthorized access to sensitive systems and resulting in a 50% decrease in security breaches related to spoofed identities, reinforcing comprehensive data protection.
- Incorporated anti-spoofing model into ReactJs app with TensorFlow.js, yielding a 30% faster response time for liveness detection, enhancing user experience, and bolstering defense against fraud attempts.

Skills: Web Scraping Tensorflow Machine Learning PyTorch ETL Transformers GCP APIs React.js Apache Spark

PROJECTS

Sky Documents Analysis

Sky Documents Analysis leverages deep machine learning technology to extract data from 156+ document types, revolutionizing information extraction.

Skills: Optical Character Recognition (OCR) Image Processing Natural Language processing(NLP) AWS MLOps

Sky Bank Check

Sky Bank Check is a revolutionary bank check analysis and data extraction system. This intelligent system leveraged deep machine learning technology to analyze and extract data from more than 62 bank check types, revolutionizing the banking industry.

Skills: OCR Object Detection Transformers Image Processing Data Pipelines

Sky Signature

Sky Signature is a system that showcases the power of deep machine learning in signature analysis and pattern extraction from a diverse range of document types to intelligently detect and extract unique signatures from documents such as bank checks and contracts.

Skills: Machine Learning Business Analysis Recurrent Neural Networks Data Processing

Sky Face Analysis

Sky Face Analysis leverages deep machine learning for face recognition, analysis, and liveness detection, offering advanced identity verification and fraud detection capabilities.

Skills: CNN Tensorflow.js React.js Web Development API Image Processing

CERTIFICATES

Generative AI with Large Language Models

Coursera • Aug 2023 – July 2023

Natural Language Processing with Attention Models

Coursera • June 2021 – Aug 2021

Machine Learning

Coursera • Apr 2021 – June 2021

Apply Generative Adversarial Networks

Coursera • May 2021 – July 2021

EDUCATION

Ph.D. Researcher

National School of Electricity and Mechanics (ENSEM) • Casablanca, Morocco

2023 – Ongoing

Master of data science

The University of Cadi Ayad • Marrakech, Morocco

2020 – 2022

Bachelor of Computer Science

The University of Cadi Ayad • Marrakech, Morocco

2017 – 2020

SKILLS

- Strong interpersonal and multilingual (English and French) communication abilities, adeptly collaborating with cross-functional teams to advance project objectives and stimulate innovative solutions.
- Proficient in Python, Scala, and R for data manipulation, analysis, and modeling.
- Proficient in converting business objectives and requirements into well-defined technical architectures.
- Proficiency in data engineering tools such as Ansible and Terraform, to automate infrastructure provisioning, configuration, and deployment processes.
- Maintains a curious and learning-oriented mindset to stay current with emerging technologies and methodologies.
- Skilled at conveying intricate analyses to non-technical audiences using storytelling and data visualization.
- Effectively convey complex technical ideas to diverse audiences.
- Proficient in containerization with Docker and container orchestration with Kubernetes.
- Ability to articulate ideas fostering a cohesive and productive work environment.
- Proficient in SQL and database management for data retrieval and manipulation.
- Experienced in conducting experiments and A/B testing.

Programming: Python R SQL Bash Javascript Java Go

Deep Learning Frameworks: Keras Tensorflow PyTorch

Frameworks: Django Flask Dash Plotly Shiny FastAPI Streamlit

Libraries: Pandas Scikit-learn NumPy Matplotlib SciPy Seaborn

Data Analytics Tools: Power BI Pentaho Talend IBM Cognos Analytics

Developer Tools: Git Docker GitLab Jenkins GitHub

Cloud: AWS GCP Azure

Infrastructure Management: Terraform Ansible

Data Integration: Informatica

Cloud Data Warehousing: Snowflake

Development Environment: Anaconda JupyterLab

Big Data Technologies: Apache Spark Hadoop Apache Kafka Apache Flink DataBricks

Math: Statistics Probability Linear algebra.

Misc: Data Mining Linux LaTeX Bash.

Databases: PostgreSQL MongoDB MySQL

Project Management Tools: JIRA.