CHAYMAE BENNOURI

Data Science & AI

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Professional Summary

Data Science & AI graduate with experience in machine learning, business intelligence, data analysis, and software development. Skilled at transforming complex data into actionable insights and supporting industrial R&D projects. Strong analytical, problem-solving, and communication skills, with adaptability to fast-paced environments.

Experience

Scientific Consultant R&D   *Oct 2024 – Present*
Leyton, Casablanca, Morocco

- Analyze software development R&D projects for eligibility under HMRC guidelines.
- Draft technical reports summarizing technological challenges, advancements, and uncertainties.
- Maintain up-to-date knowledge of R&D tax legislation and evolving software technologies.

AI/ML Network Infrastructure Intern   *Mar 2024 – Sept 2024*
Nokia Maroc, Salé, Morocco

- Completed a Master's thesis on improving industrial image classification using ensemble learning and collective intelligence.
- Performed model evaluation, error analysis, and performance optimization using confusion matrices and accuracy metrics.
- Researched trends in image recognition and machine learning and contributed to integration into R&D projects.
- Assisted with reporting improvements and supported model deployment in production environments.

Web Application Developer Intern   *Mar 2022 – May 2022*
MCA-Morocco, Rabat, Morocco

- Developed a PHP/MySQL room reservation and event management web application.
- Conducted user needs analysis to define system requirements and workflows.
- Delivered technical documentation and provided user training for smooth adoption.

Business Intelligence Developer Intern   *Mar 2021 – May 2021*
ANDZOA (DPS), Rabat, Morocco

- Built BI dashboards in Power BI to monitor agency strategies and key performance indicators.
- Implemented ETL workflows to integrate and clean data from multiple sources.
- Collaborated with cross-functional stakeholders to ensure data quality and actionable insights.

Java Developer Intern   *Jun 2020 – Jul 2020*
3GCOM, Rabat, Morocco

- Developed a Java-based city management application using object-oriented programming principles.
- Modeled real-world entities using Merise methodology to improve system structure.
- Supported senior developers in meeting project milestones and delivering a functional solution.

Education

Master's in Collective Intelligence   *2022 – 2024*
Mohammed VI Polytechnic University, Rabat, Morocco
Master's thesis: Enhancing industrial image classification in smart manufacturing using ensemble learning and collective intelligence (with Nokia).

Bachelor's in Information Systems Engineering and Software   *2021 – 2022*
Cadi Ayyad University, Essaouira, Morocco

University Diploma of Technology in Business Intelligence and Data Science   *2019 – 2021*
Cadi Ayyad University, Essaouira, Morocco

Projects & Research

- **Insurance Charges Prediction (R, Kaggle):** Built regression models and performed EDA to analyze how smoking, BMI, age, and interactions affect insurance costs.
- **Vision 2030 Data Quality Project:** Performed manual error analysis, designed a tagging system, and proposed improvements for large-scale map data.
- **Participedia Case Study:** Analyzed participatory governance cases to assess the impact of citizen engagement on policy outcomes.
- **Source Credibility Experiment:** Used Qualtrics and experimental design to study the effect of expert vs anonymous sources on trust and response confidence.
- **CoLabCareers Platform:** Contributed to an AI-enhanced job-matching platform using collective intelligence and user feedback mechanisms.
- **Water Connectivity Research in Morocco:** Conducted field data collection and statistical analysis in R on water accessibility in rural areas.
- **LSTM Sentiment Analysis:** Developed an LSTM-based sentiment classifier for video game reviews using Python and TensorFlow with error analysis for model improvement.
- **S&P 500 Trading Strategies:** Evaluated RSI, MACD, and crowd forecasting strategies using Python and R for improved trading decision support.
- **Personality and Academic Motivation Study:** Investigated relationships between Big Five traits and academic motivation using survey data and statistical analysis.

Technical Skills

- **Programming:** Python, R, Java (JEE), PHP, C
- **Machine Learning & AI:** scikit-learn, TensorFlow, Keras, PyTorch, NLP, neural networks, ensemble methods
- **Data & BI:** Power BI, SQL, Pandas, NumPy, ETL processes, dashboard creation
- **Databases:** MySQL, Oracle, MongoDB
- **Tools & Methods:** Git, Jupyter Notebooks, UML, Merise, experimental design, A/B testing, statistical analysis
- **Web:** HTML, CSS, JavaScript

Languages

Arabic (Native) / English (Fluent) / French (Advanced)

Certifications

Artificial Intelligence Foundations; Learning Data Science: Understanding the Basics; Data Visualization Using Python; Python for Data Science

Extracurricular Activities

Ambassador (Chnondir.ma);
Mentor (DigiGirlz);
Ambassador (School of Collective Intelligence);
Member (Music Club and EPDD);
Member (AIESEC International, volunteer service)