Emmanuel Ayeleso

AI Specialist | Data Scientist | ML Engineer | Data Analyst | Data Engineer

AI Specialist with over a decade of experience specializing in data science and machine learning across industries like banking and logistics; recognized for contributions with multiple promotions since beginning career as a Data Analyst in 2011. Achievements include reducing documentation burdens by up to 80% through automated contract analysis and delivering customized AI solutions that increased operational efficiency by 40%. Proficient in Python and machine learning frameworks such as TensorFlow and Keras.

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PROFESSIONAL EXPERIENCE

AI Engineer/Senior Data Scientist - 2021 – Till date
Glomacs IT Solutions and Services Inc. Canada

KEY ACHIEVEMENTS:

- Delivered customized AI and ML models to clients, generating predictive insights that led to a 40% increase in operational efficiency across diverse industries including banking, finance, legal, and logistics.
- Designed and implemented a Natural Language Processing (NLP) system that utilized vector databases to analyze user sentiment, improving analysis speed by over 60% and enhancing response accuracy for customer interactions.
- Implemented retrieval-augmented generation techniques within existing NLP workflows to create more responsive systems; reduced query response times by an average of five seconds during peak usage periods with targeted optimizations.
- Programmed the complete lifecycle for deploying machine learning models, covering data preprocessing through real-time predictions in production environments; led to a 60% reduction in overall processing time and operational efficiency.
- **Main Project 1**: End-to-end automation of contract elements extraction using NLP techniques and python packages which help reduce client's burden of documentation and tracking important contract clauses (such as expiration date, due date) by 70-80%.
- **Main Project 2:** Led a project to develop a deep learning model with CNNs for image classification, achieving over 90% accuracy in detecting defects in manufacturing images.
- Drafted internal reports that outlined how changes to existing policies could enhance operational efficiency, leading to notable decreases in turnaround times for key processes within three months.
- Led continuous integration and deployment processes for eight distinct AI models; this automation reduced model release times from two weeks down to just three days on average while ensuring high reliability.
- ***Tools and Technologies used:*** Python, BILISTN-CRF, Spark (Scala, PySpark, SparkSQL), NLP (NLTK, SpaCy), Keras, Tensorflow, GitHub, JSON, CI/CD, Ms Azure, PostgreSQL, Tableau.

AREAS OF EXPERTISE

- Artificial Intelligence
- Data Science
- Data Analytics
- Data Visualizations
- Data Engineering
- Natural Language Processing
- Generative AI & LLMs
- Computer Vision
- Machine Learning
- Deep Learning
- Data Modelling
- Big Data (Hadoop and Spark)
- Intelligent Automation
- Business Intelligence
- AI/Data Ethics, Governance and Privacy
- Recommender Systems and Personalization
- Quantitative modelling
- Operation research (OR)
- Quantitative finance
- Product analytics

TOOLS AND TECHNOLOGIES

- **AI/DS Python Packages**- Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn,
- **Deep Learning Framework-** TensorFlow, PyTorch, Keras

Data Scientist - **2019 – 2023**
uOttawa, Canada

KEY ACHIEVEMENTS:
- Developed machine learning models using supervised and unsupervised techniques to address business problems, resulting in a 20% improvement in predictive accuracy.
- Spearheaded end-to-end deployment strategies for AI systems including comprehensive integration tests aimed at identifying areas needing improvement—addressing issues related to user experience identified as top priorities.
- Orchestrated comprehensive project execution from initial concept through final delivery; implemented specific adjustments according to user requirements that increased product usability scores by 40%.
- **Main Project:** Classification of Client's network traffic flow which impacted in the number of false positive alerts of the client network traffic by 50-60%.
- Applied NLP techniques to extract and analyze textual data, improving sentiment analysis accuracy by 15%.
- Executed time series forecasting using ARIMA methodology, enabling precise predictions of market trends that informed strategic financial decisions and overall accuracy in budget allocation by 20% for the finance team.
- ***Tools and Technologies used:*** Python, BILISTN-CRF, Spark (Scala, PySpark, SparkSQL), NLP (NLTK, SpaCy), Keras, Tensorflow, GitHub, PowerBI, Advanced Excel, SQL, Tableau, Python

Data Analyst - **2011 – 2019**
FPE, Nigeria

KEY ACHIEVEMENTS:
- Created innovative machine learning algorithms tailored to specific business needs; led initiatives that achieved a measurable increase in predictive accuracy of up to 20%, driving better decision-making processes for clients.
- **Main Project:** Self-running Risk Analytic team's monthly performance reports in Python. Impact: Save report generation time by about 65-70%.
- Developed reporting systems that analyzed trends related to employment offers and wage packages; implementation resulted in a streamlined review process decreasing report generation times from five days down to just two days.

EDUCATION

- **Doctor of Philosophy, Computer Science**
  University of Ottawa, Canada   *2023*

- **Master of Science, Computer Science**
  University of Ibadan, Nigeria   *2014*

- **Bachelor of Science, Computer Science**
  University of Ilorin, Nigeria   *2008*

- **Big Data**- Apache Spark, Hadoop (HDFS, MapReduce, YARN, Hive, Pig, Mahout, Impala, Oozie, Hues, etc) and advanced analytics with Spark (PySpark, Scala, Spark MLLib, SparkSQL)
- **Gen AI & LLMs**- (OpenAI, Claude, Gemini)
- **Databases**-SQL (MySQL, PostgreSQL, Microsoft SQL Server) NoSQL (**MongoDB**, Cassandra)
- **Data Modelling**- ER Studio, Protégé
- **Business Intelligence**- Power BI, Tableau, MS-Excel
- **Programming**- Python, Java, JavaScript, R
- **REST API Framework**- Spring Boot, Flask
- **Cloud Technologies**- Microsoft Azure, AWS, GCP
- **Code Repository and Management**- GitHub, Socker, Kubernetes

PERSONAL/BUSINESS SKILLS
- Flexibility to translate business needs and use cases into actionable data-driven solution.
- Apt to learn from teammates and a system