

Jules Mohammed

julesmhad@gmail.com | (901) 648-2857 | <https://linkedin.com/in/julesmhad>

RELEVANT WORK EXPERIENCE

Codementor (Freelance)

Machine Learning Engineer

2023 – Present

Projects/Products: Generative AI/LLM's solutions.

- Research, build & Finetune scenario/task-based ML solutions on foundational LLMs for clients leveraging their open data.
- Build conversational AI applications and chatbots with frameworks like LangChain, Rasa, BotPress, Diagflow LlamaIndex, for clients resulting in 15% more customer engagement and 30% reduced latency/wait times compared to prior baselines.

Microsoft, Bing Ads & Serving, Bellevue WA

Applied Scientist II,

2021 – 2023

Projects/Products: Income Targeting, Audience Targeting.

- Led the development of a new ads product/audience targeting segment from "0 to 1" called "Income Targeting" which covers millions in DAU (daily active users) of Bing Traffic
- End-to-end ownership of requirements gathering, documentation, planning, and implementation of cost-effective solutions for Income targeting and delivered end-to-end data pipelines, training/inference pipelines & infrastructure which daily run the \$multi-million product.
- Regularly interact with leadership and work with teams to define product strategy, develop the product development road map, technology architecture and execution.
- Communicate and collaborate cross-functionally across multiple teams in operations, technology and planning to define strategic roadmaps while keeping Income targeting's impact to baselines and of all stakeholders in mind, Working to productize research models and leverage CI/CD to improve existing products and advertiser tools.
- Analyze product metrics and conduct A/B tests to discover use cases, validate pain points, and prioritize features.
- Utilize state of art model in Experiments, Research and adopt architectures which impact product metrics in building ML model improvements leading to 8% AUC increases compared to baseline models.
- Daily experiment and analyze user behavior, to understand how to design experiences that eliminate risky recommendation and maintain a positive customer experience.
- Improved Ad Click predictions by incorporating user profile data & time events into sequential models
- Evaluated several model performance AUCs and conducted AB tests to confirm xx% AUC gains upon adoption
- Built analytical dashboards and solutions for monitoring KPIs and metrics in driving OKR's for the \$multi-million product
- Optimized pipelines resource use which reduced costs by more than 50% and runtime by 0.5x via efficient data sampling in ETL scripts with SQL, C#, Airflow/Aether, PySpark, Cosmos.

Project/Products: Embedding based Ads retrieval.

- Implemented a test framework for running user parity analysis (user to user, user to ad, ad to ad distances) & data quality checks daily and before deployments. This ensures 100% accuracy in GNN user embeddings used in downstream tasks.
- Delivered designed dashboards for daily monitoring and alerting of status of user embeddings.

University of Memphis, Computational Imaging Research Lab (CIRL), Memphis, TN

Research Assistant

2019 – 2021

- Developed PySIM U-Net based segmentation model for slicing 2D layers of 3D & 4D Images obtained from SI Structured Illumination & reconstructing 3D Images from 3D SIM data.
- Created new features to TunableSIM algorithm, Tested on FairSIM. Presented research at SPIE Conference 2021
- Implemented
- Secured 1st place in local research forum 2021 and 2020, two years in a row.

BEDC Electric Plc, Customer Data Management & Analytics Team, Benin, NG

Software Engineer, Data Infrastructure / Product Manager

2016 – 2019

Projects/Products: Customer Data Management, Customer Retention/Churn Models

- Product owner of the customer Data Management Platform (DMP) solution for Industrial clients and lead engineer in delivering data infrastructure & ETL pipelines covering millions in DAU (daily active users)
- Partnered with ML Engineers to define and implement solutions that drive business value and resolve customer complaints.
- Defined product metrics, communicate with users weekly, and conduct A/B tests to discover use cases, validate pain points, and prioritize feature; Responsible for leading in a fast-paced environment and which required to strategic leadership and tactically day-to-day by diving deeply into business and technical domains.
- Designed and implemented feedback mechanisms to drive performance and cost improvement in processes.
- Delivered Django based REST APIs providing access to an insight's dashboard used by client facing field officers for loading customer data in resolving complaints with Python, BootStrap, MySQL, Chart.js

- Analyzed large multi-dimensional data and worked with cross-functional teams, including product, platform and design
- Shipped chatbots using TDIF on FB Messenger with Flask to respond customer complaints for millions in monthly user customer base and managed data ingested into a NoSQL database using MongoDB Atlas.
- Built predictive models to infer anomalies in daily energy consumptions of high-demand customers and delivered BI dashboards to report metrics. This tool is leveraged by Technical Support in investigating root causes.
- Monitored KPI's across nodes and analyze their drivers to determine the level and type of engagement required based on the risk to customer experience and utilization of technology

TECHNICAL SKILLS

- Data Visualization: Looker, Tableau, Qlikview, PowerBI, matplotlib, Grafana, Streamlit, Excel
- Preferred Predictive Models: SVM, LSTM, GBM, Random Forest, CNN, RNN
- Deep Learning Libraries: PyTorch, Tensorflow, ML.NET, CNTK, NumPy, Torch, Caffe2, Deeplearning4j, SciPy, Theano, TFLearn
- Product Analytics: AB Testing, Hypothesis Testing, User Analytics, Funnel Analysis, Product Adoption Analytics
- Modeling Cloud Data Warehouses: Redshift, Snowflake and BigQuery
- ETL/ELT: Python, Informatica, Matillion, SAP BODS, Pentaho, SSIS, SAS
- Azure: Azure Analytics (Azure Data Factory, Azure Data Lake, Synapse) AzureML, Azure Databricks, Azure SQL
- Database Administration: MS-SQL, IBM DB2, MongoDB, Postgres
- GCP: BigQuery, Cloud Composer, Cloud Function etc.
- Orchestration: Aether, Apache Airflow, Aurora Mesos

EDUCATION

University of Memphis, Memphis, TN

Degree Type: Master of Business Administration

Major: Management

Starting 2024 - 2025

Minor: Data Analytics

University of Memphis, Memphis, TN

Degree Type: Master of Science

Major: Computer Engineering

Courses: Artificial Intelligence, Information Retrieval, Computer Vision, Image Processing, NLP

Graduated 2021

Minor: Electrical Engineering

University of Ilorin, Ilorin, KW

Degree Type: Bachelor of Science

Major: Electrical Engineering

Relevant Courses: Algorithms & Data Structures, OOP, Web Mining & Search Engines, Database Systems

Graduated 2016

Minor: Electronics Engineering

PERSONAL PROJECTS

OCR Module for Financial Data (Python, Pytorch, Tesseract, OpenCV, Numpy, Scikit)

Nov 2020 - April 2021

- Developed Python modules to preprocess financial data in 5+ formats; increased Tesseract OCR accuracy > 95%.
- Implemented analytical methods to recognize and correct possible errors in balance sheets with > 90% accuracy
- Tested developed modules on 200+ files to give feedback to ontology improving mechanism for NLP model

Action-Strategy Game Adaptive Agent Behavior (TensorFlow, Python, C#, Unreal Engine 4) Jan 2020 - Feb 2020

- Created a TensorFlow model for neural network to help AI agent decide best action to take during battle.
- Obtained best action prediction accuracy of 78%.

COMPETENCIES

- Experienced in performing exploratory data analysis from structured, unstructured, and diverse large datasets to extract insights; while applying statistics, machine learning, programming, data modeling, simulation, and advanced mathematics to patterns recognition, identify opportunities, pose business questions, and make valuable discoveries leading to prototype development and product improvement.
- Experienced using data and metrics to drive improvements and working cross functionally with tech and non-tech teams
- Experienced justifying need for data investments to business leaders with a proven track record creating and promoting analytics-driven decision making.
- 3+ years of product/program management experience where I defined and implemented process improvement initiatives using data and metrics experience with various tools like Excel (Pivot Tables, VLookUps) at an advanced level and SQL
- Vastly experienced with SQL, and proficient in R/Python, Spark, Looker, and several data visualization software.
- 3+ years of driving process improvements experience and stakeholder management, dealing with multiple stakeholders at varied levels of the organization while building processes, project management, and schedules.
- Hands on experience in translating and decomposing business problems into quantifiable metrics, A/B experimentation and analysis of experimental data & communicating insights to a variety of technical and non-technical stakeholders.