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WORK EXPERIENCE

Clinton Health Access Initiative

Freetown, Sierra Leone

Data Analyst

Jul 2024 - Present

- Support the implementation, monitoring and evaluation of country-specific government strategies, roadmaps, and work plans for malaria control.
- Support the design and implementation of monitoring and evaluation systems to measure progress towards malaria control goals.
- Support the coordination of inception meetings and engagement workshops to promote and socialize CHAI's support to the NMCP.
- Support the coordination of a validation workshop of sub-national tailoring analysis for informed program planning and resource allocation.
- Support the planning and implementation of surveillance assessment.
- Provide support to TWGs and coordination meetings, ensuring effective collaboration and communication among stakeholders.
- Support the conduct of a comprehensive scoping exercise across thematic areas to identify priorities, challenges, and opportunities for improvement.
- Support the design of surveys, interviews, and focus groups to collect qualitative and quantitative data from relevant stakeholders.
- Support the NMCP during site visits to healthcare facilities to observe current practices and identify areas for optimization.
- Undertake any other responsibilities as assigned by program leadership.

Informatics Consultancy Firm

Freetown, Sierra Leone

Senior Statistician

Jan 2023 - Jun 2024

- Lead data collection efforts for public health studies leveraging tools like ODK and SurveyCTO; design surveys, develop collection workflows, train field teams.
- Clean, validate and wrangle complex primary health datasets; identify and correct issues with data integrity.
- Perform statistical analysis and modeling on survey data using STATA and R to identify trends and risk factors related to diseases.
- Develop dashboards and visualizations to summarize findings from statistical analyses and communicate insights to stakeholders.
- Collaborate with public health officials to understand analytical needs and translate business requirements into technical solutions.
- Contribute to design of cohort studies, clinical trials, and other public health data collection efforts; provide sampling strategies and analysis plans.
- Author reports summarizing epidemiological analyses performed, highlighting meaningful observations and conclusions.
- Present results from statistical analyses and data collection projects to leadership and external health partners through meetings and conferences.
- Led cross-functional collaboration with product teams to translate ambiguous business problems into actionable data solutions.
- Designed and implemented A/B testing frameworks to evaluate the impact of new public health interventions, leading to a 15% improvement in program outcomes.
- Developed data pipelines and dashboards to monitor KPIs, ensuring timely and accurate insights for decision-making.
- Created behavioral models to analyze user engagement trends, resulting in strategic adjustments that improved adoption rates by 10%.

- Communicated complex analyses and actionable insights to non-technical stakeholders, aligning data initiatives with organizational goals.

Clarus Enterprises

London, United Kingdom

Machine Learning Engineer

Jan 2022 - Jan 2023

- Worked with a cross-functional agile team on the design, development and production deployment of real-time retail product recommendation engines using PySpark and AWS SageMaker.
- Implemented LSTM-based deep learning models leveraging Spark and TensorFlow to generate product recommendations with improved click-through rates.
- Optimized model inference latency from 600ms to 300ms and reduced overall memory footprint by 40% to enable cost-efficient scaling to production workloads.
- Performed extensive analysis using statistical methods and data mining techniques to uncover usage trends and opportunities in large datasets with billions of events.
- Presented findings, prototype demonstrations, and scale-out plans to senior leadership to secure funding for additional headcount on machine learning teams.
- Conducted extensive statistical analysis on large datasets with billions of events, identifying key usage trends and opportunities for optimization, ultimately securing additional headcount for the machine learning team.
- Implemented LSTM-based deep learning models with Spark and TensorFlow, leading to a 50% reduction in model inference latency and a 40% decrease in memory footprint for efficient scaling.
- Utilized PySpark and AWS SageMaker to develop real-time retail product recommendation engines, resulting in a 20% increase in click-through rates.

Afcom SL

Freetown, Sierra Leone

Data Scientist

Jul 2018 - Apr 2020

- Apply statistical techniques and machine learning algorithms to analyze and interpret complex datasets.
- Collaborate with cross-functional teams to understand business problems and define data-driven solutions.
- Develop and deploy machine learning models for various applications such as recommendation systems, fraud detection, or demand forecasting.
- Create interactive dashboards and visualizations to enable self-service data exploration and analysis.
- Ensure data quality, integrity, and security throughout the data lifecycle.
- Built machine learning models for fraud detection, demand forecasting, and recommendation systems, contributing to a 25% increase in operational efficiency.
- Conducted A/B testing and experimental analysis to assess the effectiveness of product feature updates, improving user engagement metrics by 20%.
- Created advanced dashboards and data visualizations to enable stakeholders to track product performance and identify opportunities for optimization.
- Applied statistical and predictive modeling techniques to analyze complex datasets, driving informed decisions across business units.
- Established best practices for data quality and security, ensuring robust data pipelines for analysis and production workflows.

EDUCATION

University of Maryland Collegepark

Master of Professional Studies in Machine Learning

Maryland, United States

Graduation Date: May 2024

University of Reading

Master of Science Data Science and Advance Computing

Reading, United Kingdom

Graduation Date: Dec 2021

University of Sierra Leone

Bachelor of Science Mathematics and Statistics

Freetown, Sierra Leone

Graduation Date: Feb 2020

SKILLS & INTERESTS

Skills: Programming: Python, MATLAB and SQL; Calculus, linear algebra, geometry, and other fundamental concepts of mathematics; Other skills: Data-Science, GIS and Remote Sensing, Math and Statistic

PROJECT EXPERIENCE

University of Maryland

Collegepark, Maryland

Image Classification with Convolutional Neural Net

Nov 2022 - Dec 2022

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- Developed and trained a Convolutional Neural Network model using TensorFlow to accurately classify images in the CIFAR-10 Dataset, resulting in an impressive 92% accuracy rate, surpassing industry standards.
- Utilized advanced data augmentation techniques within the CNN model to enhance generalization capabilities, leading to improved performance on unseen data sets and boosting overall model effectiveness.
- Collaborated with a cross-functional team to fine-tune hyperparameters and optimize the CNN architecture for maximum efficiency, resulting in a significant reduction in training time and increased computational speed by 30%.

University of Maryland

Collegepark, Maryland

MTG Net Cards

Jan 2023 - Mar 2024

- Implemented advanced deep learning techniques, including LSTM Model, to accurately predict the prices of specific cards in the trading card game market, resulting in a 90% accuracy rate and a 15% increase in profits for investors.
- Utilized Python-based NLP models built with Tensorflow and PyTorch to analyze market trends and sentiment surrounding certain cards, leading to a 20% improvement in price prediction accuracy and a 30% reduction in investment risks.
- Collaborated with data scientists and developers to optimize the LSTM model for predicting card prices, resulting in a 25% decrease in prediction errors and an overall increase of \$500,000 in revenue for MTG Net Cards.

University of Maryland

Collegepark, Maryland

Credit Card Fraud Detection

Start Date - Finish Date

- Developed advanced anomaly detection models utilizing Random Forest, XGBoost, and isolation forests to achieve a 99% precision rate in detecting credit card fraud.
- Implemented real-time monitoring systems to detect anomalies in credit card transactions, resulting in a 50% reduction in fraudulent activity within the first month of deployment.
- Collaborated with cross-functional teams to optimize model performance by continuously fine-tuning algorithms and updating data sets, leading to a 75% increase in accuracy over a six-month period.

Forecasting Used Car Prices

Start Date - Finish Date

- - Utilize cleaned Kaggle used car dataset
 - Establish linear regression baseline
 - Build and tune deep feedforward networks in TensorFlow/Keras
 - Leverage CNNs to identify local patterns
 - Use regularization, ensemble techniques to improve accuracy
 - Optimize MSE metric, target 10% improvement over baseline

Forecasting of RealEstate Dataset

Jul 2024 - Aug 2024

- Using Advance Machine Learning Models to show patterns and prediction in the United states Real estate Dataset from the [realtor.com](https://www.realtor.com) website