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# UCHE NNACHI

U.S. PERMANENT RESIDENT (AUTHORIZED TO WORK WITHOUT SPONSORSHIP)

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## SUMMARY

Data scientist specializing in machine learning and predictive analytics to drive business strategy. Proven expertise building automated data pipelines, statistical models, and decision-support systems using Python and SQL, with demonstrated success translating complex data into actionable insights for cross-functional stakeholders.

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## EDUCATION

### Rochester Institute of Technology

M.Sc. in Sustainability, GPA: 3.85/4

2022

### Ebonyi State University

B.Sc. in Agronomy, Grade: Second Class

2014

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## CERTIFICATIONS AND SKILLS

- **Certification:** Project Management Professional (PMP) – In progress, expected April 2026
- **Programming Languages:** Python, R, SQL, Java, JavaScript, Scala.
- **Data Engineering:** Hadoop, Spark, Airflow, dbt, Kafka | PostgreSQL, MySQL, MongoDB, Snowflake, Redshift.
- **ML/AI Frameworks:** XGBoost, PyTorch, TensorFlow, JAX, Hugging Face; LangChain/LangGraph.
- **ML/AI Algorithms:** Time Series, Clustering, Classification, Regression.
- **Statistics:** A/B testing, causal inference, Bayesian methods, hypothesis testing.
- **MLOps:** MLflow, Kubeflow, AWS SageMaker, Vertex AI | Docker, Kubernetes Git/GitHub.
- **Data Analytics & Visualization:** Salesforce, SAP, Power BI, Looker, Tableau, NetSuite, MS Office Suite.

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## WORK EXPERIENCE

### Senior Analyst

11/2022 - Present

UGE, New York (Remote)

- Engineered Python-based ETL pipeline (pandas, geopandas, PostGIS) ingesting 1,000+ geospatial datasets for renewable energy site selection, reducing data processing time by 60%.
- Built ensemble ML models (Random Forest, XGBoost) with 50+ engineered features achieving 30% improvement in site qualification accuracy through hyperparameter tuning and SHAP-based feature analysis.
- Developed time-series forecasting models (ARIMA, Prophet) on ISO market data (NYISO, PJM) to predict electricity prices and capacity revenues, reducing forecast error (MAPE) by 15%.
- Implemented unsupervised learning (K-means, DBSCAN, PCA) segmenting 200+ project pipeline by risk-return profiles, informing \$100M+ capital allocation decisions.
- Applied NLP techniques (TF-IDF, named entity recognition, rule-based extraction) using spaCy and regex to automate regulatory compliance extraction from 500+ municipal zoning documents, reducing manual review by 40% and building searchable compliance knowledge base.
- Productionized analytics workflows via modular Python pipelines and SQL data models; automated weekly refresh of project intelligence dashboards (Tableau/Power BI).
- Led technical mentorship program training 5+ analysts on Python software engineering (Git, virtual environments, unit testing), statistical modeling (hypothesis testing, A/B testing, causal inference), and MLflow experiment tracking.

**Business Development Summer Associate**

06/2022 - 10/2022

Brightmark, San Francisco (Remote)

- Built geospatial optimization model (NetworkX, scipy.optimize) analyzing feedstock supply chains across 15+ states, minimizing transportation costs through vehicle routing algorithms.
- Engineered automated web scraping pipeline (BeautifulSoup, Selenium) building structured database of state-level incentives, RIN credits, and regulatory requirements.
- Built interactive proposal generation system using Python and Power BI, reducing RFP response time by 30%
- Created decision-support models simulating policy sensitivity and commodity price fluctuations for waste-to-energy project underwriting.

**Quality Analyst Lead**

07/2020 - 08/2021

Telus International, Ireland

- Developed predictive workforce model using time-series forecasting (SARIMA, XGBoost) on crypto volatility and transaction data, improving demand prediction accuracy by 20%.
- Developed forecasting models for support volume using crypto price volatility, transaction throughput, and lag features; improved staffing forecast accuracy by 20%.
- Implemented A/B testing methodologies to evaluate process improvements and policy changes, measuring impact on KPIs such as first-contact resolution and customer retention.

**Project Manager**

09/2015 - 09/2018

World Bank – Fadama Project, Nigeria

- Architected SQL database tracking 5,000+ beneficiaries across 20+ indicators with normalized schema, indexing, and data quality controls to track beneficiary demographics, income levels, crop yields, and program participation.
- Engineered a beneficiary management system with data quality controls, validation rules, and automated anomaly detection to ensure database accuracy and support evidence-based decision-making.
- Built predictive models to identify high-risk beneficiary segments and forecast program outcomes, enabling proactive interventions and optimized resource allocation.
- Developed automated reporting pipelines using Excel and Python to generate monthly, quarterly, and annual performance dashboards for World Bank stakeholders, reducing report preparation time by 50%.
- Built interactive dashboards communicating program impact to multilateral stakeholders.

**Assistant Program Manager**

04/2014 - 09/2015

DOVENET Nigeria (NGO), Nigeria

- Managed data collection and analysis for a USAID-funded maternal health program serving 400+ women, implementing program-level tracking to monitor patient identification, treatment outcomes, and community reach.
- Implemented a beneficiary tracking database with data validation protocols and performance indicators to monitor program delivery, volunteer activities, and resource allocation efficiency.
- Developed an impact measurement framework analyzing health outcomes, treatment success rates, and community engagement metrics to demonstrate program effectiveness and support donor accountability.
- Built automated donor reporting dashboards consolidating program, financial, and outcome data, reducing report preparation time by 40% while improving data accuracy.