JOAN NWATU

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○ Anniejoan

EDUCATION

Ph.D. Student - Computer Science and Engineering
University of Michigan, Ann Arbor, USA

📅 April 2027 (Expected Graduation) 📍 Ann Arbor, MI

- Research on representation in AI, specifically in vision & language (VL)
- Advised by Rada Mihalcea
- Member Language and Information Technologies (LIT) Lab

B.Eng. Electronic Engineering
University of Nigeria, Nsukka, Nigeria

📅 Oct 2014 – Sept 2019 📍 Nsukka, Enugu, Nigeria

EXPERIENCE

Artificial Intelligence Engineer (R&D)
Xend

📅 Nov 2019 – Jun 2022 📍 Enugu, Nigeria

- Proposed and developed a data analytics system for Xend merchants to extract and display insights from customer data leading to improved sales performance.
- Researched and implemented a computer vision project to solve the problem of Logo Identification using Pytorch pre-trained ResNet50 and Fastai library
- Set up an ETL pipeline to facilitate the extraction and transformation of data required for a Sales Prediction project using Amazon Web Services and Spark.
- Identified the problem of data inconsistency, conceptualized an efficient solution and deployed a data lake as a central data repository for Ogwugo Food Services using Amazon Web Services, Apache Spark, and Apache Airflow.

Machine Learning Intern
Ugarsoft Ltd

📅 May 2018 – September 2019 📍 Enugu, Nigeria

- Gathered and organized customer data for Natural Language Processing and Recommender System projects.
- Assisted with labeling entities in customer order data for Named Entity Recognition tasks.
- Retrained the Named Entity Recognition and Intent Classification models for an e-commerce chatbot system using Rasa Stack.
- Analyzed customer data using predictive modeling and drafted reports using data visualization techniques.

AWARDS

🏆 Awardee, 2022/2023 CSE Departmental Fellowship Award - University of Michigan

🏆 Awardee, 2021/2022 IELTS Prize - British Council Nigeria

🏆 1st Prize Solution Winner - 2020 Data Science Nigeria AI Commons Health and Wellbeing Hackathon

🏆 Student Scholar, 2019 Grace Hopper Celebration - Anita B.org

🏆 Awardee, 2016 Petroleum Technology Development Fund Scholarship (PTDF-LSS)

🏆 Awardee, 2016 NNPC/Chevron JV Undergraduate Scholarship

TECHNICAL SKILLS

Languages

`Python` `C`

Machine Learning Libraries

`NumPy` `Pandas` `Matplotlib/Seaborn/Plotly` `PyTorch/Scikit-Learn` `NLTK/SpaCy/FastAI` `Rasa Stack`

Big Data

`Apache Hadoop/Spark/Hive/Airflow` `Amazon Web Services/ Azure Databricks` `SQL/NoSQL` `MATLAB/Tableau/PowerBI`

PUBLICATIONS

👥 Bridging the Digital Divide: Performance Variation across Socio-Economic Factors in Vision-Language Models (EMNLP 2023)

Joan Nwatu*, Oana Ignat*, Rada Mihalcea

📅 June 2023 🔗 https://aclanthology.org/2023.emnlp-main.660/

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👥 A Ph.D. Student's Perspective on Research in NLP in the Era of Very Large Language Models (Recently accepted to COLING 2024)

Oana Ignat*, Zhijing Jin*, Artem Abzaliev, Laura Biester, Santiago Castro, Naihao Deng, Xinyi Gao, Aylin Gunal, Jacky He, Ashkan Kazemi, Muhammad Khalifa, Namho Koh, Andrew Lee, Siyang Liu, Do June Min, Shinka Mori, Joan Nwatu, Veronica Perez-Rosas, Siqi Shen, Zekun Wang, Winston Wu, Rada Mihalcea

📅 June 2023 🔗 https://anonymous/

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👥 Visual Geo-Diverse Annotations on a Budget (Recently accepted to COLING 2024)

Oana Ignat, Longju Bai, Joan Nwatu, Rada Mihalcea

📅 October 2023 🔗 https://anonymous/

PROJECTS

Award-winning solution for 2020 DSN AI Commons Health and Wellbeing Hackathon
DietAI

📅 September 2020 📍 Enugu, Nigeria

- Collaborated with team members to design project structure for an AI-powered nutrition web application for local Nigerian dishes
- Created an image dataset of 35 classes of local Nigerian food (including a None class)
- Trained an image classifier on the Nigerian food image dataset to 78 percent accuracy. 🔗 https://github.com/Anniejoan/Foodscan

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Logo Identification
DietAI

📅 April 2020 📍 Enugu, Nigeria

- Trained ImageNet pretrained ResNet models on public logo datasets (Web2M, Logo 2k and Flickr 27) using google colab, then proceeded to deploy the Flickr 27 trained model which had the best accuracy on binder for public testing. 🔗 https://github.com/Anniejoan/logo

ACADEMIC & PROFESSIONAL MEMBERSHIPS

Black in AI
ACL Association for Computational Linguistics
AnitaB.org Local Community - Africa
GSBES Graduate Society of Black Engineers and Scientists
Black SiS Black Sisters in STEM
NSE Nigerian Society of Engineers
NUESA Nigerian University of Engineering Students Association
APWEN Association of Professional Women Engineers in Nigeria

INVITED TALKS

Machine Learning Bootcamp Speaker
University of Nigeria Engineering Career Fair

📅 Sept 2021 📍 Enugu, Nigeria

- Delivered a lecture on 'Introduction to Artificial Intelligence and Possible Career Paths' and led Engineering students and recent graduates through a guided deep learning project practical using Fastai.

LEADERSHIP & SERVICE

Admissions Recruitment Liason
CSE Graduate Org.
University of Michigan, Ann Arbor

📅 May 2023 – Present

- Developed and implemented strategies to improve admission processes and student diversity
- Facilitated student recruitment campaign at Computing Conferences (Grace Hopper/Tapia)

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Webmaster LIT Lab
University of Michigan, Ann Arbor

📅 May 2023 – Present

- Manage LIT website publications

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AI and Accessibility
Michigan AI Symposium
University of Michigan, Ann Arbor

📅 Nov 2022

- Facilitated name tag preparation and reception of the symposium attendees.

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Vice President
Nigerian Society Of Engineers (UNN)
University of Nigeria

📅 Dec 2016 - Dec 2017

- Planned and organized a successful Mechatronics workshop/seminar for UNN engineering students.
- Worked with the team of NSE executives to promote and sustain a seasoned engineering undergraduate experience for students.

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Honorable Member
NUESA House of Representatives
University of Nigeria

📅 Oct 2015 - June 2016

- Participated in important decision-making, bill approvals, and dissemination of relevant information to the students
- Represented the interest of my constituency and conveyed the complaints of the students to higher authorities