Abdelrahman Mohamed

Software Engineer & AI Researcher

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Summary

Accomplished AI & Machine Learning Researcher with a strong tenure at prestigious institutions including Harvard, Johns Hopkins, Expertise in AI, ML, NLP, GANs and LLM. Proficient in Python, Java, C++. Committed to tackling complex challenges in healthcare, finance, and education with a proven track record in precise AI/ML model development.

PROFESSIONAL EXPERIENCE

Conduct Science – (Remote – Internship)

Software Engineer, August 2023 – Present

- Engineered a cutting-edge Replicates Extractor software, driven by OpenAI, leveraging scientific papers to swiftly compile comprehensive lists of materials and suppliers. This groundbreaking solution revolutionized the extraction process, saving an impressive 85% of manual effort. **(**Github**)**

Harvard University (FARIL) – (Remote – Task Based)

Software Engineer & AI Researcher, July 2023 – Present

- Employing Convolutional Neural Networks (CNNs) to construct a total of six models: three dedicated to Ankle views (Anteroposterior, Lateral, and Oblique) and three tailored for Foot views.
- Attained exceptional accuracy levels for Ankle views: Anteroposterior (98%), Lateral (92%), and Oblique (92%). Similarly, for Foot views, achieved commendable accuracy rates: Anteroposterior (86%), Lateral (84%), and Oblique (86%). **(**Github**)(**Google Colab**)**

Johns Hopkins University (James Robert Brasic Lab) – (Remote – Task Based)

Software Engineer & AI Researcher, May 2023 – Present

- Developed a sophisticated data entry software designed to seamlessly store and analyze test scores for Parkinson's disease. This innovative solution not only streamlines data entry but also facilitates comprehensive data analysis, resulting in an impressive 80% reduction in manual effort. (Github)
- Expertly crafting Excel sheets, generating insightful visualization charts, and conducting thorough analysis on diverse datasets 60% increase in productivity.

Albert Einstein University (Tim Duong Research Lab) – (Remote – Task Based)

Software Engineer & Researcher, July 2023 – Present

- Engineered a cutting-edge Natural Language Processing (NLP) software capable of accurately detecting prior surgeries in patients based on AAA (Abdominal Aortic Aneurysm) Reports. This groundbreaking solution exhibits an impressive 97% accuracy rate on test data. (Github)

EDUCATION

Bachelor of Computer Science, Zagazig University – Zagazig, Egypt, *July 2023*

GPA: 3.19

COURSES

- "Machine Learning Engineering for Production (MLOps)" – DeepLearning.ai
- "Software Design and Architecture" - University of Alberta
- Artificial Intelligence, Machine Learning, Data Structures and Algorithms, Database Systems
- Deep Learning Frameworks: PyTorch, TensorFlow
- Web Frameworks: Flask, Django
- Programming Languages: Python, Java, C++

PROJECTS

1. **Fake News Detector (Climate Change News - Graduation Project) (Github) (Kaggle)**
    - 160 record Collected climatefeedback.org, and 8477 record from politicfact.com.
    - Labels preprocessed from 12 label to fit only 2 labels.
    - Model Accuracy on test data is 87%.

CERTIFICATION

- Machine Learning Cross-skilling (Projects: Charity ML, Expert System in IT)
- Professional Data Analysis (Projects: US Bikeshare Data, IMDB films dataset)

PUBLICATION

- 2023 "Current Trends in Generative Adversarial Networks for Computer Vision Applications" (Review Article Pending)
- 2023 "The ultimate masquerade: Normal CNS variants mimicking pathologies for the ER Radiologist to know" (Abstract in ASER - Review Article Under Review)
- 2023 "An Overview of Federated Learning Techniques for Distributed Computing Environments" (Review Article Under Consideration)

POSTER PRESENTAION

- Enhancing Lung Cancer Detection using Deep Learning Models (ICMI) (2023).
- AI-powered Solutions for Sustainable Energy Consumption (Annual Climate Change Summit, Sharm El-Sheikh, Egypt) (2023).

LANGUAGES

- Arabic (Native)
- English (Fluent)