MUNACHISO SAMUEL NWADIKE

msn307@nyu.edu · munachisonwadike.github.io · LinkedIn · +971525683756
Keywords: Machine Learning, Artificial Intelligence, Deep Learning

Education

Mohammed Bin Zayed University of Artificial Intelligence - Abu Dhabi, UAE **Dec. 2022**

- MSc. in Machine Learning (ML), 4.0 GPA, Full scholarship - Advanced ML, Statistical Inference, Optimisation

New York University, Abu Dhabi - 19 Washington Square North, NY **Dec. 2019**

- BSc in Computer Science & Math Specialisation, Full Scholarship - Differential Equations, Advanced Probability, Real Analysis
- **Winner, CEO for a Day 2019**, Refinitiv Data Co. MENA (*London Stock Exchange*) · web
- High school valedictorian. Best in Mathematics, Physics, IT, Chemistry, Biology, English

Work experience

Social Machines And Robotics (SMaRT Lab) **Jun. 2023 – Present**

Artificial Intelligence Engineer

- Leading a team to develop models for automatic analysis of human personality leveraging the "Big 5" framework , to achieve publication in top-10 CS journal
- Creating algorithms for end-to-end prediction of emotional and/or mental state with lower error rates that enhance industrial viability

Center for Integrative Artificial Intelligence **Jan. 2021 – Dec. 2022**

Machine Learning Systems Engineer

- Managed a project that architected a solution using intelligent laser-guided drone coordination that won semifinalist spot in competition with $3,250,000 in prizes · pdf · web
- Collaborated with a team that used state of the art computer vision models to detect sea-faring vessels in robot OS simulations · web
- Led a team that demonstrated a pipeline for converting movies to cartoons using Generative Networks (AnimeGAN) · web
- Coordinated a team that developed a new algorithm that uses bayesian optimisation for automatic AI hyperparameter configuration

Clinical Artificial Intelligence Lab **Jan. 2019 – Dec. 2020**

Artificial Intelligence Research Engineer

- Secured grant worth USD **$**8000 to use AI to enhance internet-based education, from "Deep Learning Indaba" IndabaX fund· web
- Led a team that development of a mobile app for American sign language detection using a phone camera and finger spellings · web
- Conceptualized and developed a data collection platform, to catalog unique machine-learnable features in african accents · web
- Spearheaded a project that showed vulnerability of algorithms used for detection of diseases in chest X-rays to "few-pixel" backdoor attacks, undetectable to the human eyes, with state-of-the-art performance on the National Institute of Health dataset. Showed how radiologists can detect stealth attacks using visualization techniques such as Gradient Class Activation Mappings (GradCAM)

Technical Skills

Programming languages: Python, C/C++, Matlab, Bash, LaTeX, ***Cloud and Computing:*** Docker, Kubernetes, MicroK8s, GCP, AWS, Slurm, Linux, Unix, ***Artificial Intelligence:*** BoTorch Tensorflow, Keras, PyTorch,NumPy, NLTK, SpaCy, ForteNLP, ***Robotics:*** ROS, Gazebo, Point Cloud Library (PCL), ***Soft Skills:*** Presentation Skills, Research, Project Management, Word, Excel, Advance French, Intermediate Chinese (Mandarin)

Computer science publications

[1] Memoization-Aware Bayesian Optimization for AI Pipelines with Unknown Costs · *Neural Information Processing Systems 2023* (in review). Munachiso Nwadike, A. Essofi, R. Salahuddeen N. Kumar, E. Xing, W. Neiswanger, Qirong Ho

[2] Explainability Matters: Backdoor Attacks on Medical Imaging · Trustworth AI in Healthcare Workshop, *Association for the Advancement of Artificial Intelligence 2021* · pdf. Munachiso Nwadike, T. Miyawaki, E. Sarkar, Michail Maniatakos, Farah Shamout