Kabir ABDULMAJEED

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Profile

Intelligent systems enthusiast, excited about the design, development, and implementation of novel data-driven systems and algorithms. I have experience working with NDT sensors and technologies. Algorithms I have worked on have been used to provide unique solutions in Saudi-Aramco's pipeline infrastructure. Over the years, I have developed skills in areas such as Robotics, Data Analytics and Visualization, Computer Vision, Machine Learning, and Deep Learning.

Education

- M.Sc., Computer Science (Georgia Institute of Technology, 2018-2020)
  - *Specialization: Machine Learning - CGPA: 4.00/4.00*
- M.Sc., Systems Engineering (King Fahd University, 2015-2017)
  - *Specialization: Systems, Robotics & Control - CGPA: 3.72/4.00*
- B.Eng., Electrical and Electronic Engineering (Osun State University, 2009-2014)
  - *Specialization: Signals, Systems & Comms - CGPA: 4.70/5.00.*

Computing Skills

- Experienced in algorithm development with Python including Scientific computing with NumPy and SciPy.
- Proficiency in Matlab, Simulink, Python libraries such as Pandas, Matplotlib, OpenCV, Sklearn, and Keras.
- Familiarity with C++, R, JavaScript, Livewire, VREP, SQL, PostgreSQL, Cassandra; Self-taught HTML, CSS, Ai.
- Knowledge of development tools such as Unix, Git, ROS, Gazebo, LaTeX, LabView, SolidWorks, Tensorflow.

Work Experience

ROSEN Research and Technology Center, United Arab Emirates/Saudi Arabia. Jul. 2018 – till date
Sensors and Algorithms Developer

- Developed machine learning algorithms for automatic detection of pipeline features.
- Developed algorithms for the detection of coating disbondment in Saudi-Aramco coupons.
- Developed algorithms for crack detection from UT scans in steel plates.
- Worked on the distance-time mapping of geometry pigs using nonlinear probabilistic filters.
- Assisted in the design of experiments, data collection, cleaning, and storage from testbeds.
- Developed modern interactive D3.js visualization for near real-time replay of ILI runs.
- Managed local repository of code, datasets, datasheets, resources, and articles.

Abike Memorial Clinic, Nigeria Jan. 2017 - Jun. 2018
Data Analyst/Consultant

- Developed Software for the enhancement of Medical Ultrasound images.
- Designed framework for the digitization of Patient OPD forms using OCR.

- Developed GUI for patient data repository using PyQt, and MySQL.
- Installation, troubleshooting, maintenance of Clinical Software and IT hardware.
- Advisory role on the purchase and upgrade of IT infrastructure.

Alcatel Lucent Technologies, Nigeria. Feb. 2011 – Aug. 2011

3G Systems Engineer (Internship)

- Maintained 3G BTS/Node-B Software, Radio configurations, and Fiber-optic connections.
- Worked on Node-B installations, commissioning, integration, and troubleshooting.
- Worked on RRH configuration, installation, commissioning, and troubleshooting.
- Experience with 2G Network and 3G Architecture including UTRAN/UMTS, Site survey and Acceptance.
- Responded to over 250 telecoms cell site NMC/NOC alarms without supervision.
- Led and coordinated teams of riggers and technicians during installation and troubleshooting tasks.

Projects[1], Works, Seminars, and Honors

- Autonomous Geophone Sensor Deployment using a UAV [MSc Thesis], 2016.
- Design and Construction of Mobile Phone Jammer using Extrinsic Noise [BEng Thesis], 2014.
- Nvidia GTC 2020, Deep Learning Institute (March – April 2020): 3D Segmentation with VNet, Anomaly Detection with Variational Auto-Encoders, Data Augmentation and Segmentation with GANs, Introduction to CUDA Python with Numba.
- Evaluation of Supervised Machine learning Algorithms: Support Vector Machines, K-Nearest Neighbors, Decision Trees (+ AdaBoost), Random Forests, Neural Networks, and Deep Networks, 2019.
- Implementation of Neural Machine Translation, Artistic Style Transfer, CNNs, GANs, Object Recognition and Tracking with YOLO, Particle and Kalman filters, Sequence generation and analysis with RNN, LSTM, and GRU.
- Kabir Abdulmajeed. (2018). Autonomous Control of a Quadrotor-Manipulator; Application of Extended State Disturbance Observer https://arxiv.org/abs/1910.09052
- Magdi, S., Abdulmajeed, M. K., Mojeed, Oyedeji. (2019). Continuous-time Model Predictive Active Disturbance Rejection Controller for UAV. Submitted to IEEE Transactions on Industrial Electronics.
- Abdulwahid Al-Saif, Kabir Abdulmajeed, Sami El-Ferik. (2020). Active Disturbance Rejection Optimal Control for Quadrotors. Submitted to International Conference on Systems, Signals, and Devices (SSD2020).
- Kabir Abdulmajeed, Monsuru Adeleke, Labode Popoola. (2020). Online Forecasting of COVID-19 using Limited Data. Submitted to Elsevier Data-in-Brief.
- King Fahd University Deanship of Graduate Studies Scholarship (January 2015).
- National Budding Engineers Scientists and Technologists, 2nd Position Nationwide – Nigeria, (February 2014).
- Osun State University Best Student Awards – obtained four University graduation awards (January 2014).
- HPC/GPU CUDA Programming Course, Dr. Ahmed El-Mahdy, February 2016.
- Mechatronics, Machine Vision, Internet of things with NI-Tools, ISA, 2016.

[1] For more information on the projects kindly visit my webpage: https://kbmajeed.github.io/