Folajimi OLANIYAN

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Personal Webpage
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Education

Spet., 2020 – Present **Master of Science, Computer Science**, *University of Grenoble Alpes*, Grenoble, France
Coursework: *Robotics and IoT, Reinforcement Learning, Visual Computing, Intelligent Systems*

2010 – 2015 **Bachelor of Science, Electrical/Electronic Engineering**, *University of Lagos*, Lagos, Nigeria
Thesis: *Design and Control of a Micro Aerial Vehicle*

Research Experience

Summer Research Internship

June, 2021 – Sept., 2021 **Detection and tracking of moving persons using deep learning techniques**

- Created a dataset by using Python and ROS to label the position of legs in 2D laser data recorded over several hours of Robair's navigation in indoor/outdoor environments.
- Implemented and trained a Convolutional Neural Network in PyTorch to detect and localize the legs of moving persons, achieving 90% accuracy on the test set.
- Proposed a Recurrent Convolutional Neural Network (CNN-LSTM) to track a moving person over time.

Advisor: **Prof. Olivier Aycard**, *University of Grenoble Alpes* (*Bio*)
Team: MARVIN: Artificial Intelligence and Robotics Lab, Grenoble

Semester Research

Feb., 2021 – June, 2021 **An AI Approach to Detect Performance Issues in Distributed Systems**

- Trained and evaluated the performance of one-class classification algorithms in detecting performance anomalies in time series data from distributed applications.
- Built a Digital Shadow of an Apache Spark application by using a time-series database (Prometheus) to monitor and collect run-time metrics.
- Measured Dynamic Time Warping distances between time-series data of executions of normal and anomalous programs to select the subset of metrics used in training.

Advisor: **Prof. Thomas Ropars**, *University of Grenoble Alpes* (*Bio*)
Team: LIG ERODS, Grenoble

Projects

2021 **Robot object tracking and obstacle avoidance (code)**

- Implemented a control algorithm (in ROS) that allows a mobile robot to detect and track a moving person in a clustered environment using 2D laser data.
- Extended the tracking implementation to include obstacle detection and avoidance during navigation.

2019 **ICLR 2019 Reproducibility Challenge (code)**

- Reproduced results of a submission presenting a convolutional implementation of Conditional Random Fields for post-processing in Segmentation tasks.
- Wrote Python code to measure the performance of the proposed technique on the PASCAL VOC 2012 validation set.
- Investigated the effectiveness of the approach for post-processing of existing Segmentation networks.

Fellowships & Awards

2021 – 2022 ***MIAI@Grenoble Alpes Scholarship*** Multi-disciplinary Institute in Artificial Intelligence, Scholarship for exceptional students in Artificial Intelligence

Publications

Posters

Nov. 2016 **F.A. Olaniyan, D.T. Emukpere, M.A.K Adelabu**, *Design and Control of a Micro-Aerial Vehicle*, "Design and Control of a Micro-Aerial Vehicle", presented at the 11th University of Lagos, Annual Research Conference and Fair, Lagos, Nigeria, Nov 8 – 10, 2016.

Professional Experience

BAO Systems, LLC.

Feb. 2017 – Aug. 2020 ***Software Engineer***, *Nigeria*

- Developed an android application that recognizes and tags objects in videos, leveraging the power of Amazon's Rekognition service.
- Led the design and development of Dharmaplatform's anonymous survey collection API that allows large-scale collection of data from unregistered users. This involved generating unique URLs for every project and implementing the necessary data access constraints for anonymous users.
- Developed Dharmaplatform's case management API for cross-referencing records across multiple health intervention projects to help clients track data related to a person over time.

Technical Skills

Languages Python, JAVA, C/C++, JavaScript, Octave/MATLAB

Frameworks PyTorch, Tensorflow, ROS, Gazebo, Apache Spark, Scikit-Learn, OpenCV

DevOps Docker, Git, Prometheus, JIRA