Anthony Amgad Fayek Selim

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EDUCATION

Ain Shams University   **Cairo, Egypt**
Bachelor of Computer Engineering; Dual degree with UEL UK; **GPA:** 3.46/4.00   *Sep 2019 – July 2024*
Related Coursework: Machine Learning, Deep Learning, Computer Vision, Big Data, Distributed Computing

EXPERIENCE

Fotopia Technologies   **Cairo, Egypt**
Machine Learning Intern   *Aug 2023 – Sep 2023*
- Used different machine learning techniques to improve the accuracy of OCRs.
- Developed a pipeline that parses scanned documents into digital format files.
- Integrated individually developed modules with the team into one pipeline

Telecom Egypt   **Cairo, Egypt**
Big Data Analytics Trainee   *July 2023 – Aug 2023*
- Utilized PowerBI to analyze multiple realistic datasets.
- Learned about the Hadoop Distributed File System (HDFS) and how it is used.
- Used the acquired skills to analyze the S&P500 as a final project

NTI (With VMware & Amazon Academies)   **Remote**
Datacenter Virtualization Trainee   *July 2022 – Aug 2022*
- Learned about the VMware Virtualization concepts (Cloud, Software-Defined Storage, and Network Virtualization)
- Used Amazon Web Services (AWS) services to deploy servers of various uses

PROJECTS

Football Players Tracking from Multiple Cameras using Deep Learning (Graduation)   **Python | PyTorch | OpenCV | C++**
Sep 2023 – Present
- Collaborated with **KoraStats** as a project sponsor to ensure alignment with industry needs
- 5-module system that tracks football players in a match across 2-3 cameras using computer vision and deep learning
- Implemented a path predictor module using an Encoder-Decoder Network to efficiently get the trajectory of the player on the screen to predict occlusions with other players
- Integrated the 5 modules into a multithreaded system that efficiently manages memory and CPU resources

Secure Encrypted Outlook App   **Python | PyWin32 | PyQT5 | MongoDB**
Dec 2023 – Jan 2024
- Used PyWin32 to interact with the local Outlook App and read its inbox as well as send emails
- Encrypted emails with AES and included a Digital Signature using RSA and SHA-256
- Key shared by storing users' public keys on MongoDB for any other users to retrieve and share AES keys securely

3D Realtime Multiplayer Racing Game   **Sockets | AWS | Unity | MongoDB | Python**
May 2023 – June 2023
- Used Unity (C#) to build the client side of the connection, as well as built the server-side connection using Python
- Implemented 2 multithreaded servers that allow parallel rooms where each 2-4 players can join a racing game
- Created matchmaking, chat, as well as network failure handling features
- Deployed both the Python servers and MongoDB instances on EC2 AWS for reliable access

Mars Rover Rock Sample Picking Simulator   **Python | OpenCV | Sockets**
Nov 2022 – Jan 2023
- Used Computer Vision methods to allow a simulated Mars Rover to pick up unique rock samples
- Traversed the environment with over 85% Fidelity and 95% Mapping while picking up at least 85% of the samples encountered

SKILLS

Programming: Python, C++, C, C#, Java, R, JavaScript, HTML/CSS, SQL, Node.js
Tools: TensorFlow, PyTorch, Keras, OpenCV, AWS, Git/Github, MongoDB, JIRA