Hamzeh Alzweri

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Education

Master of Science in Computer Science and Engineering	Fall 2021 – Spring 2023
Michigan State University, specialization in Machine Learning	GPA: 3.75

Bachelor's degree in Computer Information Systems	Fall 2015 – Spring 2019
University of Jordan	GPA: 3.53

Work Experience

Software Developer (.NET C#, Python)	Nov/2019 - Jun/2021
Australian Post Global eCommerce Solutions	London, UK

- Built integrations to exchange data with external customers and carriers in a production setting through Microsoft Azure Functions with C#. These components allowed the company to preprocess the data according to each partners' preference and reliably send large amounts of data daily to many partner companies through APIs, Webhooks, or SFTPs which maintained an important source of profit for the company.

- Developed components that frequently receive large amounts of data, like files or API contents, from multiple partners, preprocess it, map it to an internal domain model, and save it to the database or forward it to other partners. This was a core function of the company's business and needed to be highly reliable and thoroughly unit-tested.

- Built multiple Web-scrapers, in Python-Selenium, that collects data daily from 21 websites, preprocess it, and format it as an excel report to an internal team in the company. This project reduced 2-3 hours of the entire teams' daily workload as it completely automated a task that had been manual, and it was acknowledged by the Chief Information Officer.

- Developed scripts that process and format CSV, XLSX, and XML data files to build multiple reports which were used internally, these reports also automated some tasks of different teams in the company. Also worked with Azure DevOps services and pipelines to test and deploy code with CI/CD and repositories for versioning control across Development, UAT, and production environments.

Programming and Machine Learning Skills

Familiarity and hands-on experience:

- *Machine Learning and Deep Learning*: Supervised & Unsupervised Learning, Neural Networks, Optimization algorithms (Gradient Descent, ADAM, etc.), Transfer Learning, Encoder-Decoder models, DNNs, CNNs, RNNs, Transformers, Attention, Embedding, Linear & Logistic regression, SVMs, Generative Modeling, and white-box and black-box adversarial attacks.

- *Computer Vision:* Various CNN architectures, Image Synthesis with GANs/Vision Transformers, Image Classification, Object Detection, Object Segmentation, Content-Based Image Retrieval, Image Captioning, and 3D semantic segmentation. **Currently working on an image synthesis paper with Prof. Arun Ross.**

- *Natural Language Processing:* Part-of-Speech tagging, Document Sentiment Analysis, Named Entity Recognition.

- *Evolutionary Computing:* Multi-Objective optimization, Genetic Algorithms, NSGAII and Evolutionary Programming.

Programming languages: C#, Python   ***Technologies:*** PyTorch, Numpy, Matplotlib, scikit-learn, Pandas, Hugging Face, Entity Framework core, and Azure Functions.

A list of my awards, projects, and certificates is at: https://hamzehalzwairy.github.io/#awards