

Moaaz Mahmoud Madany Hassan

Python Backend Developer

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Aswan, Egypt

Military Status: Exempted

Experience

Software Engineering Assessment Scorer

Sep. 2021 – Present

Woven Teams – via Upwork (Freelance)

- Evaluate candidates' responses for adherence to best engineering practices in a variety of technical assessments.
- Review and hand results to the clients (hiring managers at tech companies).
- Assessments include coding challenges, data analysis and visualization, collaboration scenarios (emails, customer support tickets), system design, and other formats.

Projects

Project Management API – Dec. 2023 | [To Project](#)

Flask/PostgreSQL REST API that offers RESTful endpoints for managing users, tasks, and their associations.

- Supports user registration, authentication, and admin privileges
- Handles task CRUD and user assignment
- Used Flask, Flask-Smorest, PostgreSQL, and SQLAlchemy

Interview Scheduling API – Dec. 2023 | [To Project](#)

REST API for interview scheduling and management.

- Implemented CRUD operations
- Implemented input validation and error handling
- Deployed the API to Docker
- Used Flask, Flask-RESTful, SQLite, and SQLAlchemy

Python/Bash Automation for CNN Incremental Training – Apr. 2023 | [To Project](#)

This was part of my graduation project. My team was trying to execute some ML code, but it kept crashing due to insufficient memory.

- Developed a Python script to divide our large dataset into smaller files to fit into memory.
- Implemented Jupyter notebooks and Python scripts for CNN training on divided dataset batches and saving checkpoints.
- Created a Bash script to manage training iterations.
- Secured the scripts against concurrency issues.
- Peak RAM utilization dropped to below 12 GB. Initially, 24 GB was not sufficient.

Data Science Salaries Analysis – Jul. 2022 | [To Project](#)

- Analyzed data science salaries, considering location, experience, and other factors.
- Identified key findings, including the impact of the pandemic on the salaries, with a notable decline in 2021 and rapid recovery in 2022, suggesting their higher susceptibility to pandemic impacts.
- Used Python, Jupyter Notebooks, Plotly, Matplotlib, Seaborn, NumPy, and Pandas for analysis.

Finding Donors for CharityML | [To Project](#)

- Part of Udacity's Machine Learning Cross-Skilling Nanodegree.
- Trained, tested, and compared the performance of a Decision Tree, Support Vector Machine, and AdaBoost models to predict whether one's income exceeds 50K USD/year based on demographic.
- Reached an accuracy of 0.8375 and an F-score of 0.6889 on testing data with AdaBoost.

Ford Gobike Data Analysis | [To Project](#)

- Performed exploratory and explanatory data analysis on a dataset containing information about the trips taken by the members of the Ford Gobike service.

Skills

Key Technical Skills

REST API Development – API Testing – Databases – Data Visualization

Programming/Scripting Languages

C/C++ – Python – Bash – SQL – Java

Technologies

Flask – Pandas – Matplotlib – Seaborn – Plotly – SQLAlchemy – PostgreSQL – SQLite – Docker – Git/GitHub

Other Experiences

Writing Articles on Medium

- Writing articles about best engineering practices and interesting problems I face.

Took Part in ACM ECPC

- 2023: My team ranked first in the university qualifying round and placed 158th in the final ECPC round.
- 2022: My team ranked first in the university qualifying round and placed within the top 5% (150th out of 3000+ teams) in the final ECPC round.

Education

B.Sc. – Computer Engineering, Aswan University

Sep. 2018 – Jul. 2023

Graduation project: Driver Monitoring System (DMS)

Built a system that periodically captures images of a driver and processes them using a deep-learning model to detect any drowsiness to give an alert for the safety of everyone inside or around the vehicle.