

Aya Selim

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Education

Arab Academy for Science and Technology **Class of 2023**
Academic Postgraduate Diploma (Conversion Master) in Computer Science [[transcript](#)]. GPA: 3.79/4.00
Related coursework: OOP. System Programming. Database management systems. Artificial intelligence. Data Structures and Algorithms. Computer Network. Discrete Math. Operating Systems.

Ain Shams University **Class of 2022**
BSc. in Pharmaceutical Sciences. GPA: 3.85/4.00

Experience

Google Summer of Code (GSoC) MdAnalysis Organization | Project Internship [[Report](#)] **June 2022 – Oct 2022**

- Built a novel guesser API system that enhanced the accuracy of molecular attribute predictions for diverse topology systems.
- Wrote **+2500** lines of code for building the system.
- Working on building guesser classes for PDB and Martini data topologies.

Projects

Egyptian Used Cars Price Prediction: (*Data pipelines – web scraping – Airflow – SQL – AWS – Spark - Neural Networks - RESTful API*) [[GitHub](#)] [[Demo](#)]

- Implemented a comprehensive data workflow to scrape, transfer, store and process scraped used cars data daily.
- Trained a neural network model on the data coming from the pipeline and achieved **92% accuracy** in predicting prices.
- Built a dashboard to deploy the model and expose it through an API to the user.

Tech Job Prediction & Skills Recommendation Platform: (*Sklearn – Clustering – TensorFlow - MlFlow*) [[GitHub](#)] [[Demo](#)]

- Worked on end-to-end data science processes from cleaning, analytics, features engineering, and training the model.
- Trained the data on the xgboost classification model and achieved an average of **83% recall score** on predicting job category.
- constructed a dashboard to deploy the model and expose it through an API to the user.

Chicago Crashes Data Project: (*Data pipelines – Workflow Orchestration – SQL – Cloud services – Docker*) [[GitHub](#)]

- Developed an end-to-end data pipeline for extracting crash data of Chicago city daily.
- Extracted valuable insights and created visualizations using Looker.

General Purpose ChatBot: (*nlTK – Natural language processing(NLP)*) [[GitHub](#)]

- Constructed the main functional part of a simple general-purpose chatbot.
- Developed bot logic using TF-IDF methodology, analyzing corpus files to identify key terms.

AI Minesweeper: (*Inference rules*) [[GitHub](#)] [[Demo](#)]

- Created an AI agent that can identify safe squares and uncover all mines by applying propositional logic rules.

Tic-Tac-Toe AI Agent : (*MiniMax algorithm*) [[GitHub](#)] [[Demo](#)]

- Implemented an AI agent that can play Tic-Tac-Toe and win using a propositional MiniMax algorithm.

Skills

Languages, Software & Frameworks: Python, Java, C, C++, SQL, Spark, Docker, AWS, DBT, Airflow.

Spoken Languages: Arabic (Native), English (Full Professional Proficiency, 7.5 on academic IELTS).

Extracurricular & Leadership Activities

ECPC Qualifications Collegiate Programming Contest.	Aug 2022
Maker Diploma – San3a Academy [Project journal].	July 2021 – Oct 2021
Egypt Scholars Inc. Lab in Scientific Research Advanced Level.	Feb 2020 – May 2020
iHub Innovation Camp (iCamp).	July 2019

Awards & Achievements

Astrafekra National Competition (Finalist) **Sept 2019**

- National competition for medical students about innovative technological ideas in the healthcare sector.