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EDUCATION

STEM High School In Kafr El-Shiekh

October 2017 - Aug 2020

STEM Education Egypt

Bachelor of Artificial Intelligence

Aug 2020 - Jun 2024

Kafr El-Sheikh University

Main Courses: Linear Algebra, Statistics, Math for Computer Science, Data Structures and Algorithms, Object Oriented Design, Computer vision, Databases & SQL, Machine Learning , Deep Learning, Natural Language Processing, Introduction Reinforcement Learning and multi agent design, Cognitive Psychology.

GPA : 3.7

PROFESSIONAL EXPERIENCE

R&D Machine learning Engineering

Sep 2022 - Now

SpeedLegal

Remotely, California, USA

- Building an information retrieval system with retrieval augmented generation pipelines and properly evaluating them using precision@k, recall@k, Mean Reciprocal Rank and MAP.
- involved in building an MVP.

R&D Machine learning Engineering Internship

Mar 2022 - Aug 2022

SpeedLegal

Remotely, California, USA

- Writing simple Algorithms and python scripts that involve using regex for modifying the output of layout parsing model that accounts for the structure of text in pdf documents.
- Building and evaluating machine learning models for solving NLP classification tasks using Sci-kit learn and Transformers Library.
- building a TF-IDF & Naïve bayes classifier for classifying text under legal standard clauses and buckets.
- fine tuning a pre-trained version of BERT for an extractive question answering from legal contracts.
- Working with model Interpretability and Explainability (LIME).

PROJECTS

Crash PPO Agent

Jan 2023

Research Project

- implementing a policy gradient algorithm which is Proximal Policy Optimization (PPO) from scratch on an agent that plays the retro game Crash Bandicoot: the huge adventure.
- Using Pytorch for creating the actor and critic shared CNN architecture as well as the heads for the actor and the critic and finally the surrogate objective functions.
- Using openAI's gym retro library for the game's environment.

Project Link on Github: [CrashAgentPPO](#)

PPO Paper Reference: [Proximal Policy Optimization Algorithms](#)

AWARDS

2nd Place In Nile University's Undergraduate research forum

October 2020

Nile University

- This was a car security surveillance system with face recognition that checks whether the driver is the car owner or not to prevent burglary. Furthermore, training a facial recognition system.

ACTIVITIES & COMMUNITY SERVICE

Algorithms & Data Structures Tutor in (GDSC)

July 2022 - September 2022

Kafr El-Sheikh University's Google Developer Student Club

- I gave teaching sessions with other tutors about Data Structures and Algorithms.

Artificial Intelligence Study Roadmap

August 2022

Kafr El-Sheikh University

- I published an article where I built an organized, well-planed and resourceful academic undergraduate road-map for studying Artificial Intelligence referencing universities that teach this major.
- Specifically built with the nearest MOOCs (Massive Online Open Courses) that have the same content. I listed all the resources and citations. roadmap : [AI Academic Road-map](#)

SKILLS

Programming

Python, C, OOP, Git, Pytorch, Linux

Communication

Arabic (native), English (Fluent), German (beginner)