

MOUHAMMAD BAZZI

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, IL

2022 - 2023

Master of Artificial Intelligence

GPA: 4.0 | Courses: Machine Learning, Deep Learning, Natural Language Processing, Big Data Technologies, Computer Vision, Advanced Artificial Intelligence, Advanced Data Mining, Data Preparation and Analysis, Online Social Media Analysis

CY TECH, CERGY, FRANCE

2020 - 2023

Master of Engineering Applied Mathematics, Data Science

Degree in engineering mathematics applied to computer science (specialization in Data Science)

LYCEE SAINT-LOUIS, PARIS, FRANCE

2018 - 2020

2-Year Bachelor (Mathematics, Physics, Engineering)

CPGE (two-year intensive program preparing for the national competitive exam for entry to French engineering schools), ranked top 10% June 2020

EXPERIENCE

Data Engineer Intern

Summer 2022

GreenCookie

Paris, France

- Built from scratch all the backend of a web extension in order to release a prototype product (completed in 4 months)
- Designed and developed a database in order to collect the data captured by the extension (deployed on Heroku and operational) (SQL, MySQL)
- Developed and deployed a secure and well-documented API Rest to link the database and the extension (deployed on Heroku and operational) (Python Flask Swagger)
- Designed a scientific model to calculate a carbon impact thanks to several variables gathered through the web navigation of the user (two models proposed after doing several searches)

PROJECTS

Framework-Free Neural Network Implementation

October 2023

Illinois Institute of Technology

Chicago, USA

- Implemented and tested a neural network from scratch without using any deep learning frameworks such as Keras, TensorFlow or PyTorch
- Built from scratch the computation graph and its forward and backward traversal in the program (without support for dynamic configurations), gaining a deep understanding of the fundamental principles behind deep learning algorithms
- Created a robust training procedure, including a loss function, evaluation function, and stochastic gradient descent algorithm with adjustable learning rate and decay parameters, enabling effective optimization of the model weights.

Industrial Dynamics of A.I

2021 - 2022

CY Tech

Cergy, France

- Led a group in a project aiming to create a European database on everything linked to the sector of artificial intelligence (companies, employees, etc.) to analyze it
- Scraping Glassdoor job offers (artificial intelligence and others) and cleaning up the collected data to create a reliable database: thousands of job offers were collected (Python, Web Scrapping, Data pre-processing, NLP)
- Managed to find a structure or rules in the database using classification models (R, Data pre-processing)

Mobile Game Project

2021 - 2021

Independent Project

Paris, France

- Designed and developed *Fluffy Cloud*, a 2D mobile game using Unity Engine and C#, with intuitive controls and engaging gameplay suitable for players of all ages
- Worked independently on the project to develop programming skills, understand object-oriented programming, and gain experience in Unity game development
- Studied various AI algorithms including A* and alpha-beta, with the aim of incorporating them into the game design.
- Decided not to use these algorithms in the final game, but instead incorporated a lightning feature that tracks the position of the cloud and adds an additional level of challenge and excitement to the gameplay

SKILLS

Languages: French (Native), Arabic (Native), English (Fluent), Spanish (Basic), Italian (Basic)

Software, IDE, and tools: Excel [VBA, Pivot, etc.], Linux, Visual Studio Code, Jupyter Notebooks, Git, Eclipse, Hadoop, Pig, Hive
Computer languages: Python [Keras, TensorFlow, Selenium, BeautifulSoup], R, SQL, C# [Unity], Scala, Java, Web Development