OMAR BRADAI

AI Engineer

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Portfolio : portfolio.omarbradai.tn

PROFILE SUMMARY

A passionate AI engineer with a strong academic foundation, dedicated to advancing the industry's transformative potential and continually growing through new challenges.

EDUCATION

National Institute of Applied Science and Technology *09/2019 – 09/2024*

- University of Carthage, Tunisia
- Degree: Industrial Computing and Automation Engineering.

British council, Tunis, Tunisia *10/2013 – 10/2018*

- Degree: First Certificate in English (FCE) with a C1 level in English

WORK EXPERIENCE

AI Engineer *11/2024 - PRESENT*

EmyeHR, Tunisia

- Automating HR processes using AI-powered conversational **agents with Generative AI.**
- Managing and optimized **PostgreSQL** databases for improved efficiency.
- Developing AI-powered modules for the company's web solution:
  - APIs: Developing scalable APIs using **Python and Flask.**
  - Backend: Implemented robust functionalities with **Node.js.**

Data science engineering intern *04/2024 - 08/2024*

EmyeHR, Tunisia

- Optimized integration between chat **agents**, enhancing prompt quality and reducing operational costs.
- Fine-tuned **GPT-3.5, LLama 3.2 and Phi-3** for precise and efficient **SQL** generation tailored to company data.
- Developed an automatic synthetic **data** generating program using **Large Language Models (LLMs), CUDA**.
- Developed **benchmarking** systems to evaluate agent **performance** and effectively **visualized** results, improving transparency and enabling informed decision-making across teams.
- Conducted **Research and Development (R&D)** on **AI-driven** systems for predicting employee behavioral trends and resignation, utilizing **online** and **batch machine learning with scikit-learn**, customized for EmyeHR clients' personal data.

Machine learning intern *07/2023 - 09/2023*

Influence Consulting, Tunisia

- Developed an automatic speech recognition **(ASR)** artificial intelligence model fine-tuned for the Tunisian dialect, achieving a **10% reduction** in Word Error Rate (WER) and Character Error Rate (CER) compared to existing models, while enhancing **generalization**.
- Created a dataset for the **ASR** model with 1000+ transcriptions and over an hour of recordings using multiple data sources.
- Applied **cleaning and preprocessing** techniques using **NumPy, OpenCV,** and **TensorFlow** to maximize the potential of a small dataset
- Collaborated with team members to develop the project's web platform infrastructure using **Terraform**, **AWS**, **Docker**, and other **DevOps** tools such as **Bitbucket**, fostering efficient workflows and scalable deployment solutions.

PERSONAL PROJECTS

- An **automatic speech recognition (ASR)** Model finetuned on the Tunisian dialect **: Deep learning, Data collection**
- An **automatic parking garage door** prototype with **facial recognition : Machine learning, Arduino, Python**
- **AI writing assistant** google docs extension **: Generative AI, LLM, Typescript**

SKILLS

- Python / C++ / JavaScript / Flutter
- TensorFlow / NumPy / OpenCV / LLM / ML
- GIT / Azure / AWS / PostgreSQL / Bitbucket

LANGUAGES

- English (C1)
- French (Intermidate)
- Arabic (Native)