Ayoub EL HOUDRI

y-aoub | Ayoub EL HOUDRI | y-aoub.com | ayoub.elhoudri@ensea.fr | +33 7 83 22 67 03

Education

CY Paris University, ENSEA and ETIS Lab — Sept 2022 - 2023
MRes. Artificial Intelligence and Complex Systems — *Cergy, France*

CY Tech — Sept 2020 - 2023
MEng. Applied Mathematics and Computer Science - Artificial Intelligence (Double Major) — *Cergy, France*

Classe Préparatoire du Lycée Jean Bart — Sept 2018 - 2020
BSc. Mathematics, Physics and Computer Science — *Dunkirk, France*

Experience

SCRAPO — Sept 2022 - Present
Co-founder — *Paris, France*

I co-founded SCRAPO this year with mentorship and advisory support from CY Entreprendre. SCRAPO is specializing in extracting, organizing, and analyzing data at a large scale. We aim to offer a fast, customized, and optimized solution to businesses in need of exploitable data.

Karmen — Jun 2022 - Sept 2022
Computer Vision Engineer - Intern — *Paris, France*

I worked with the R&D team of Karmen on a research project consisting of developing an algorithm capable of extracting tabular data from scanned documents while maintaining the table's form. This algorithm was a result of optical character recognition, image processing, and deep learning techniques combined.

CNRS — Jan 2022 - May 2022
Research Assistant - Academic Project — *Cergy, France*

My role was to support researchers in their understanding of the industrial dynamics of Artificial Intelligence by studying its consequences on the labor market in France. I worked, more specifically, on building a database of companies recruiting in the field of AI and other related fields as well as gathering their financial data.

Digimind Labs — Jun 2021 - Sept 2021
Computer Vision Researcher - Intern — *Berlin, Germany*

My work consisted of helping researchers in building a deep learning model for shape reconstruction of some specific objects from a single RGB image of the object. I was in charge also of generating 3D synthetic data and using it to train this model.

Projects

A model of the remapping of neural coding for navigation and working memory (ongoing)

n this research project, we study through simulations how the visual place and path integration association can be modeled to explain the remapping mechanisms observed in the hippocampal area of the brain which will be useful to better understand how our hippocampus produces and maintains a coherent working memory over time.

Compressed sensing: A mathematical model for signal compression

In this project, we implement and compare some models of data compression which consists of reconstructing a signal from fewer samples that do not satisfy the Nyquist-Shannon sampling condition, a process called compressed sensing. The lower sampling rate makes storing and processing this data much more efficient.

Awards

National Mathematical Olympiads Ranked 10th in the Moroccan National Olympiads of Mathematics in 2018

Moroccan Excellence Scholarship A scholarship offered to the best high school students in the country to study abroad

Skills

Programming Skills Python (NumPy, SciPy, Scikit-Learn, Pandas, Matplotlib, TensorFlow, OpenCV, Quantlib, NEURON) . R . C . SQL . Linux . HTML/CSS . LaTeX. MATLAB . Git/GitHub

Mathematical Skills Linear Regression . Dimensionality Reduction . Probability Theory . Markov Chains . Differential Equations . Cross Validation . Classification . Clustering . ANOVA . A/B Testing . Machine Learning . Graph Theory . Differential Geometries . Linear Algebra . Mathematical Analysis

Languages English (Bilingual proficiency) . French (Native proficiency) . Arabic (Native proficiency) . Spanish (Intermediate proficiency)