El Hassan HAJBI

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EDUCATION EXPERIENCES

Machine Learning Engineering - AI Engineer

- Leading an AI plateform usecase for procurement (vision to proof of value)
- Machine learning engineer for procurement, working on digital and AI for Business productivity and standardisation at scale: Building Multimodal Content-based similar product retrieval (search engine) from scratch using visual data (3D CAD and 2D images), product description (text)... From September 2023 to August 2024
- POC on Lead Prioritisation and win rate prediction for China sales team.

Schneider Electric Intern

Data scientist intern at procurement GSC (price optimisation and strategic forecasting): Plastic and electronic price forecasting for raw material category buyers From Mai 2023 to September 2023

Computer engineering @ Grenoble Institute of Technology - Ensimag, last year, MMIS (Mathematical Modeling, Imaging, and Simulation), Currently From september 2021 to June 2024

Preparatory courses @ Lycée d'excellence (LYDEX) Benguerir - Maroc, Intensive studies of mathematics and physics during 2 years From September 2019 to June 2021

QUALITIES

Impact oriented for the business Build/test/iterate fast mindset

Good communication skills, popularizing science and self-initiating

Strong technical skills and analytical mindset

Innovative and curious Eager to learn new things Good organization skills

Evolve in a multicultural and challenging environment

DOMAINS

Geometric Modeling and animation 3D computer graphics

Advanced algorithmics Object oriented programming Combinatory optimization Numerical optimization

Advanced statistics and machine learning

Cryptographie, compression and error detection
Statiscical analysis and document mining
Database
Computer vision
Medical imaging

Artificial intelligence
Image treatment
Financial diagnostic
visual representation
Computational biology

High performance computing Mecanical-Numerical simulation

Virtual and augmented reality Surface modeling

TECHNICAL STACK

Cloud: Azure, databricks, aws

AI/ML: LangChain, LlamaIndex, Hugging Face..

Agent Development: LangGraph, Dagster (Data orchestration), Langfuse/Langsmith

(LLM monitoring/observability $\ldots).$

Machine Learning: statistics, machine learning and deep learning specialization and MLOps, Semantic similarity, Multimodal AI, Contrastive learning, LLM and

VLM, 3D similarity, vector stores ...

Data: MongoDB, Snowflake, Pydantic ..

Languages: python,C++,C,java,R,assembly,bash,sql.

Web Development: HTML, CSS, JavaScript (basic knowledge).

Others: Github and familiar with Figma.

PROJECTS Implementation of indexing, matching and 3D similarity approach

Keywords: indexing, mesh, topology, spectral graph theory, geometry, computer vision, representation learning ...

High Performance Computing Project: GP-GPU computing and parallelization of Harris detector in computer vision

Computational Biology Project: Development of a SNP Analysis Tool for Illumina Sequencing Data and Proof of Concept for Addressing AMR Crisis

Medical Imaging Project: Building a Medical Navigation Solution from Scratch

Mecanical-Numerical Simulation Project: 3D Simulation of Wheat Strands Dynamics with Frictional Contact in Wind-Driven Fields

VR/AR Project: Development of a Virtual Reality Human-Machine Interaction Solution for Acceleration-Based Selection, Not Depth

Surface Modeling Project: Development of a Laplacian-Based Surface Deformation Tool Using the Handle Metaphor

Software engineering project: Making a compiler in Java (On January 2022)

Database project: Team project based java and sql2 (On November 2022)

3D geometry project: Using Kinect, Bezier curves and B-splines, we had to modify the shape of a pre-scanned face in 3D. (September - October 2022)

GUI project: Writing a library for widgets design in C language (April 2022)

LANGUAGES

French Fluent, English Fluent, Chinese A2.

INTERESTS

Member of MLOps community (Chip Huyen), and Multimodal AI for video understanding (James Le from Twelve Labs)

A mix between Research community and AI builders (Entrepreneur First, AI Tinkerers)

MLST - Machine Learning Street Talk (Intellectual podcast around AI research)

Artificial intelligence, machine perception and object detection

Complex interpretable multi-horizon multivariate time series forecasting (TSF) Multimodal ML models

BioAI

Participated on coding battle - Le Shaker - in 2021 and 2022 Student entrepreneur followed by Pépite Ozer at Grenoble - France