ACHRAF
AIT SIDI HAMMOU

R E S E A R C H   I N T E R N S H I P

SKILLS

Data Science
• Python, OOP, R
• Pytorch, Scikit learn, pandas, seaborn

Web Development
• Backend: NodeJS, GraphQL, Flask, Firebase, MongoDB, MySQL
• Frontend: React, NextJS, GatsbyJS, React Native, D3
• DevOps: Docker, CI/CD
• Design, Web Scraping

Miscellaneous
• English - fluent (C1)
• Git / Github
• C++
• Matlab
• Project management

CONTACT

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EDUCATION

ENSTA Paris - Applied Mathematics | 2019 - 2022 | 4.0 GPA
• One of the Top 10 French Engineering School, ENSTA is renowned for its research and academic excellence.
• Linear Algebra, Calculus, Topology, Differential Equations, Optimization, Statistics, Probability, Stochastic Calculus, HPC.

Preparation class to enter top Engineering Schools | 2016 - 2019
• Advanced fundamentals in Algebra, Calculus, Topology and Physics.

Medical School | 2015 - 2016

EXPERIENCES

• Research Internship | summer 2020
Evaluating **image captioning models in the artistic domain** (SemART, BibleSVA):
• state-of-the-art model reproduction (VGG19, embeddings, Sequence-to-sequence, contrastive loss, attention mechanism)
• model evaluation (BLEU, BLEURT)

• Freelancing in Web Development | June 2020 - March 2021
• Developed an online platform for virtual role-play interviews for Paris Medical University.
• Developed a platform to host a virtual event for a luxury brand in the cosmetic industry.
• Developed a Linkedin scraper for a job-hunting agency.
• Developed a proof-of-concept for a startup in the food-tech industry.
• Designed and developed a mobile application as well as a back-office for an independent travel planner.
• Designed and developed a marketing website for an early-stage startup.

PROJECTS

Von Karman Simulation | Summer 2020
Modeling and simulation of Von Karman vortex in fluids with Matlab.

Genetic Algorithm in Python | April 2020
Implementation in Python of a Genetic Algorithm with different techniques.

Shape from Shading in C++ | February 2021
Estimating 3D shapes by observing shades in 2D images (LBFGS algorithm).

Team project with the French Navy | November 2021 - Today
I investigate Machine Learning approaches to solve the following problem:
How to infer the destination port index (ex: FRBES for the port of Brest in France) of sailors based on their unstandardized inputs?
The methods I have studied so far include RNN, Word2Vec and Transformers.

Personal projects | 2020 - Today
• COVID application with data visualization and API of the French data.
• A fintech mobile application, a time-tracking tool, a content curation application, a cohort-based courses platform, and more.

COMMITMENTS

Early-member/co-founder of ENSTARTUP | 2019 - 2020
The very first association promoting Entrepreneurship at ENSTA through:
• interviews with alumni founders
• pitch competitions
• newsletters (fintech, research)
• workshops and hackathons

Secretary-General - TAEP Junior-Enterprise | 2020
• Secretary tasks, in charge of data privacy and GDPR compliance
• HR - recruiting consultants and administrators
• Elaborating the strategy and tracking the activity with tools and metrics