

# HICHEM SEMMAR

📍 Dublin, Glasnevin

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## EDUCATION

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**European Master in Law, Data and AI – Computing Stream (Erasmus)** 📄 Sep 2023 – May 2025  
Dublin City University – Avignon Université

- Fully funded Erasmus Mundus Scholarship.
- Algeria's representative among 26 other ambassadors of different countries.
- Chosen from 2000 application.

**Master's degree in Computer Science – Artificial Intelligence** 📄 Sep 2021 – Jul 2023  
University of Science and Technology Houari Boumediene (USTHB) – Bab Ezzouar, Algeria

**Samsung innovation Campus - Artificial Intelligence** 📄 Jul 2022 – Dec 2022

- Fully funded training camp (350h) in the field of AI.
- Project Realisation & Team-lead.
- Chosen from 32000 application.

**Bachelor's degree in Computer Science** 📄 Sep 2018 - Jul 2021  
University of Science and Technology Houari Boumediene (USTHB) – Bab Ezzouar, Algeria

**Baccalaureate in Technical Mathematics** Sep 2017 - June 2018  
Mohamed Seddik Ben Yahia High School – Tipaza, Kolea, Algeria

## PROFESSIONAL EXPERIENCE

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**Artificial Intelligence Internship** 📄 Feb 2023 – Jul 2023

*Research Center on Scientific and Technical Information (CERIST) – Algiers*

Development of a new Convolutional Neural Network architecture for a Pulmonary Lesions segmentation along with a 3D visualization.

- UNet Variation.
- Github team Collaboration.
- Dataset Collection.

**Application Development Internship** Dec 2021 - Sep 2022

*Emploitic – Algiers, Draria*

Web-scraped 76 foreign job offers to Novojob.com database then automated the data insertion (over 50k offers) using Dockerization.

- Python - Scrapy Library.
- Docker Ubuntu-18.04 Images.
- Database managed with SQL.
- Github team Collaboration.

**Browsers Extension Development Internship** Dec 2019 - Jan 2020

*Emploitic – Algiers, Draria*

Development of Firefox/Chrome extension that scrapes automatically LinkedIn profiles.

- Javascript.
- Github team Collaboration.

## PROJECTS

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**BiotIA Website, Bacteria Resistance Tracking** 📄 Mar 2023 – Jul 2023

National website that tracks the resistance of the bacteria, synchronizing all the laboratories' data into a single place.

**Nasa Space App Challenge - The Art in Our Worlds (Hackathon)** 📄 Oct 2022 (56h)


Developed a generated-AI that creates artist pictures in the context of space. Trained on Nasa's APOD database combined with pictures of real artists.

**Water Sources Potability Classification (SIC's Project)** Jul 2022 – Dec 2022


Realization of an intelligent embedded system device that uses Machine Learning and Deep Learning with integrated with sensors and a microscope to determine water potability.

**Detection and Classification of Mammary Pathologies (Bachelor's project)** 📄 Dec 2020 – Jul 2021


Detection of Mammary Pathologies from Mammographic Images and their Malignancy Classification using the Theory of Evidences, Fuzzy Sets and Image Processing.


**Collaborative Enhancement of PyDS Library Using OOP (Open Source)**  Dec 2020 – Jul 2021  
Integrated additional combination methods to the theory of evidence: Smet, Yager, Dubois-Parade, and Dezert-Smarandache.

Optical Character Recognition– **Deep learning**. 

Bank Deposits prediction – **Deep-learning** 

Classification of financial customers complaints according to their specific financial services – **LSTM** 

Classification of traffic road signs – **CNN**. 

Classification of smiling/sad face – **CNN**. 


## ARTICLES

**Exploring the Impact of E-Privacy Directive**  Sep 2023 – Dec 2023

The paper explains the key sections and the purpose of the directive, critiques its deficiencies and proposes enhancements for the future upcoming Regulation.

**Twitter's AI Image Cropping Tool with Racial Bias**  Sep 2023 – Nov 2023

The paper reveals biases in Twitter's AI image cropping, comparing to ethical issues and GDPR concerns. It suggests alternatives, emphasizing the tradeoff between algorithmic consistency and human judgment.

**Chest-CT Scan Lung Segmentation Used Techniques**  Sep 2023 – Oct 2023

The literature review explores AI's pivotal role in advancing lung and lesion segmentation in medical imaging, emphasizing the superiority of Deep Convolutional Neural Networks.

**Classifying Water Infestation**  Dec 2022 – Feb 2023

The paper introduces a new Deep Convolutional Neural Network approach for Bacteria identification using Microscopic-images and density calculation.

## SKILLS

<b>Concepts</b>	GDPR, Research, AI and Ethics, Data-Visualization, Data Governance, Semantics, Comparative Digital-Law, Machine Learning, Deep Learning, Data Mining, Genetic Algorithms, Distributed Intelligence, Neural Language Processing, Stochastic Processes, Graphical Models, Uncertainty Quantification, Constraint Satisfaction, Game Theory, Multiagent Systems, Computer Vision.
<b>Languages</b>	C/C++, Python, Java, Camel, JavaScript, HTML/CSS, SQL, MySQL, SQLPlus, SQL3.
<b>Libraries</b>	TensorFlow, Keras, Pyds, NodeJs, Flask, SQLAlchemy, Scikit-learn, Pandas, Matplotlib, Seaborn, Numpy, Selenium, Scrapy, OpenCV, MongoDB, BeautifulSoup, nltk, PyQt5, Spade.
<b>Soft Skills</b>	<ul style="list-style-type: none"> <li>• Adaptability, Teamwork, Communication : <b>Internships.</b></li> <li>• Public Speaking, Critical Thinking, Problem-Solving : <b>University.</b></li> <li>• Leadership, Conflict Management, Stress Management : <b>Samsung Training/Project.</b></li> </ul>
<b>Tools</b>	Tableau, GitHub, Linux, Sony Vegas Pro; Reaper, Canvas, Latex.

## LANGUAGES

**French** *TCF B2*  
**English** *Ielts 6.5 (B2)*

**Arabic** *Native*

## CERTIFICATIONS

<b>Incubation Program By OpenMindsClub</b>	Mar 2022 – Avr 2022
<b>Step and talk English event 2022.</b>	Mar 2022 – Mar 2022
<b>Redhat Trainning camp</b>	Jul 2019 – Jul 2019