ABDELKADER DIB
ENERGY SYSTEMS MODELING & ANALYSIS

📍 05 Rue Trumeau, Rueil-Malmaison, 92500 France
📞 +33605636115
✉ abdelkader.dib@ifpen.fr
in Abdelkader DIB

KEY SKILLS
Data Science
Deep Learning
Traffic simulation
Energy systems modeling
CAD Modeling

SOFT SKILLS
Communication
Teamwork
Leadership

COMPUTER PROFICIENCY
PROGRAMMING LANGUAGES:

C/C++, Python, Matlab/Simulink

SOFTWARE

Amesim, Ansys, MATSim, SolidWorks

DOCUMENT PREPARATION

LaTeX, Microsoft Office

CERTIFICATIONS
Coursera: Machine Learning – Stanford University
Coursera: Deep Learning – Stanford University
Openclassrooms: C++, Python

LANGUAGES
English
French
Arabic

OTHERS
Driving License
Led winning teams in Drillbotics and Rocketry competitions as Head of Projects.

PROFILE
Experienced engineer with expertise in machine learning and deep learning for engineering applications, particularly in energy systems modeling. Passionate about leveraging data science to solve complex engineering problems and drive innovation.

EXPERIENCE

IFP ENERGIES NOUVELLES, FRANCE • DEC 2021 - PRESENT

Research engineer – Road traffic emissions modeling

Processed extensive datasets to create synthetic populations for improved accuracy in emission estimations. Utilized MATSim for traffic simulation and vehicle physical models for comprehensive vehicle simulations. Developed deep learning models to generate vehicle speed profiles and estimate emissions.

IFP ENERGIES NOUVELLES, FRANCE • MAR 2021 - SEP 2021

Intern – H2 internal combustion engine modeling

Evaluated the performance and limitations of an H2 combustion model embedded within Simcenter Amesim software, contributing to advanced simulation of engine systems.

LIFSE, FRANCE • FEB 2020 – SEP 202

Intern – Axial turbopump modeling

Created a 1D multi-phase CFD software for designing and analyzing axial turbo-pumps, enhancing fluid dynamics simulation capabilities.

EDUCATION

PHD• DEC 2021 – NOV 2024
CENTRALESUPELEC PARIS SACLAY / ETH ZURICH, FRANCE

Computer Science

MASTER'S DEGREE • SEP 2020 – SEP 2021
ENS PARIS SACLAY / IFP SCHOOL – PARIS, FRANCE

Electrification of Automotive Propulsion

MASTER'S DEGREE • SEP 2019 – SEP 2020
ARTS ET METIERS, PARISTECH / SORBONNE UNIVERSITÉ – PARIS, FRANCE

Energy and environment

MASTER'S DEGREE • FEB 2020 – SEP 2020
NATIONAL POLYTECHNIC SCHOOL – ALGIERS, ALGERIA

Mechanical engineering