

YACINE BOURAHLA

Structural Analysis Engineer

Zaventem

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SUMMARY

I am an engineer, passionate about mechanical design and structural analysis, with the ambition to apply my skills to the aerospace sector. My background has provided me with a solid foundation in both theoretical studies and practical problem-solving, gained in demanding environments such as the nuclear industry. During my internships, I worked on numerical simulations as well as the drafting of technical documentation. I place great value on multidisciplinary teamwork, where collaboration, adaptability and creativity are essential to achieving high-quality results.

WORK EXPERIENCE

Structural Analysis Engineer, APCO TECHNOLOGIES (Aigle, Switzerland) Mar 2024 - Sept 2024

- Designed the geometry of a welded steel structure (overhead crane), including modeling and meshing for linear and non-linear cases (beam, shell and solid elements).
- Performed equivalent static, modal, modal-spectral and time-history (transient) analyses.
- Optimization of numerical computations through the adjustment of parameters (ex. damping).
- Developed a new dynamic analysis method in Ansys, based on the Finite Element Method (FEM), including transient modal analysis with non-linear effects.

2nd-year internship - Junior Structural Engineer, EDF DIPDE (Marseille, France) Mar 2023 - Aug 2023

- Wrote technical reports on the robustness of steel frame structures.
- Drafted technical specification documents focused on the protection of structures.

Master's Thesis Project, Faculty of Science – University of Montpellier (France) Sept 2021 - Aug 2022

- Prepared a project proposal for a research call.
- Set up a protocol for data acquisition through field observations.
- Processed and interpreted acquired data using Python.
- Development of a simplified one-dimensional physical thermal model using Fortran.
- Wrote a scientific project report.
- Collaborated with a team of scientists and technicians on research projects.

EDUCATION

Language School (London, United Kingdom) Mar 2025 - Aug 2025

Engineering School, IMT Mines Alès (France) 2022 - 2024

Master's in Geophysics, Faculty of Science - University of Montpellier (France) 2020 - 2022

Bachelor's Degree in Science, Faculty of Science - University of Montpellier (France) 2017 - 2020

TOOLS

- Python / Fortran : data processing and development of a simplified one-dimensional physical model
- VBA (Excel)
- Ansys (Workbench, APDL, SpaceClaim 3D CAD)
- Graitec Advance Design
- GIS tools (QGIS) : mapping and computation
- 3D modeling (CloudCompare, MetaShape and Faro Scene)

KEYS SKILLS

- Languages : French (native), English (professional working proficiency)
- Report writing and oral presentations
- Literature review and research
- Able to work independently
- Teamwork (multidisciplinary collaboration)
- Ability to adapt quickly