RAULNAVAMUEL GARCIA

Aerospace EngineerMasterinAdvanced Structural Calculation

A proactive person with demonstrated ability to apply theoretical knowledge to practical engineering problems. Strong analytical and problem-solving skills.

EXPERIENCE

Madrid *Jun 2025 - Present*

Simulation Engineer *Rheinmetall Expal Munition*

Development of **internal software** tools using **Python, MATLAB, and C++.**
Dynamic and transient thermal analysis for explosive modeling.

Madrid *Apr 2024 - Jun 2025*

Stress Engineer *Adática Engineering*

Static and dynamic structural analysis for aerospace applications (Hypermesh, Ansys, SimSolid).
Transient and steady-state thermal analysis with radiation model for satellites (Hypermesh,SimLab, CFD Hyperworks).
Development of AI software for deep learning using neural netwroks (DQN).
CFD analysis (CFD Hyperworks)

Madrid Mar *2025 - Present*

Thermal Analysis of Space Structures Professor *EDDM (MECEA)*

Implementation and analysis of **transient nonlinear** finite element models with **thermal radiation and conduction.**

Toledo Sept *2024 - Present*

Python Programming Teacher *Algoritmics*

Expert in Python, specializing in data structures, algorithms, and object-oriented programming. Skilled in writing efficient and maintainable code.

Toledo *Jul 2019 - Present*

Private Tutor *Self employed*

Improved communication skills to explain complex concepts clearly. Help students develop effective study routines, enhancing their understanding and interest in programming.

EDUCATION

Madrid *2018 - Present*

Aeronautical and Space Engineer
Universidad Politécnica

Madrid *2023 - 2024*

Master in Advanced Structural Calculation
EDDM-Engineering Education

PROJECTS

Test bench for a hydrogen-powered electric turboprop engine

Ensuring the proper functioning of the **turboprop test bench** under maximum operating conditions through **analysis of strength, stability, and vibrations**, as well as the **aerodynamic study** of the engine's nacelle using **CFD**.

Sar-Eco Low Earth Orbit Satellite (LEO Satellite)

Leading the **thermal design** and **justification** of the project. Designed a **thermal interface** to ensure the periodic operation of high-voltage pulsed electronic components using **transient thermal analysis** with **radiation** and **conduction** models. **Optimized structural mass** while meeting static load and vibration requirements during launch.

Horizontal Tail Plane (HTP)

Redesigned an existing HTP configuration, **optimizing composite laminate** properties. Ensured structural integrity and compliance with **static load** case requirements as specified by the client's policy, achieving enhanced

Preliminary 3D desing of a turbofan

Led a team of four in the **3D design** of a **turbofan combustion chamber** and coordinated component assembly, ensuring seamless cross-team communication and collaboration

Administration and direction of a virtual aeronautical company

Assisted in company management and led the production department, strengthening teamwork skills. Key achievement: Achieved the highest grade among competitors.

CERTIFICATES & COURSES

Advanced excel course-UPM

50 hours course about how to Iter and organise huge amount of data in an optimized way.

Initiation course in Catia V5-UPM

Practical overview about 2D and 3D aeronatical design, chiey the modules Part Design and Generative Shape Design of Catia V5.

Introduction to AutoCad

Basics notions about design and rendering products.

CONTACT INFORMATION

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SKILLS

- Excel (Advanced, VBA)
- Hypermesh | Nastran
- Matlab, Phyton
- CFD Hyperworks
- Acusolve Ansys | Ansys
- Fluent SimSolid Inpire
- Catia V5

LANGUAGES

English
Intermediate. B2 TOEIC

Spanish
Native