ADAM ELGHAIB

AEROSPACE ENGINEER

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ABOUT ME

I graduated in Aerospace Engineering from the Polytechnic University of Catalonia, Spain. Currently, I work as an electronics validation engineer at Bertrandt's Group. My role consists of ensuring the correct integration between Mercedes-Benz automotive systems. Throughout my academic career, I was part of an amateur rocketry student association called Cosmic Research and I also had the opportunity to do an internship at CIMSA, a company specialized in developing parachutes for all kinds of applications. I have always been passionate about science, particularly, about robotics and space exploration. Learning and being in constant development is something fundamental to me. For these and other reasons, I am eager to study the Master Programme in Space Science and Technology at LTU, and maybe someday be able to contribute to the development of the space exploration industry.

EDUCATION

Aerospace engineering (30 ECTS) January, 2023 - June, 2023

Linköping University

Erasmus programme in Sweden.
Final degree thesis: Exploration of Force Control in UAV Actuators, 24 ECTS. Grade: Pass with distinction 5.0/5.0
Courses: Aircraft Systems Engineering, 6 ECTS.

Aerospace vehicles engineering (210 ECTS) 2019 - 2023

Universitat Politècnica de Catalunya

Solid and multidisciplinary training in the different aspects of engineering, but with emphasis on the aspects specifically related to aeronautics and space vehicles.
Avarage grade: 7.13/10.0

WORK EXPERIENCE

Automotive electronics validation engineer (HiL) July, 2023 - Present

Bertrandt Group

Carrying out test automation to ensure the correct software integration between different car electronic control units (ECUs) through hardware in the loop (HiL) techniques.

- In charge of mirror heating, dimming, and adjustment systems of two different car series, and seat heating, ventilation, comfort, and alcohol-blocking systems of another car series.
- In close contact with the customer, Mercedes-Benz AG, and with colleagues in Germany.
- My main tasks consist of, executing around 800 tests every month and a half for each software release to ensure the correct functioning of the systems required by the customer. Reporting unexpected behaviors, and implementing new tests in Visual Basic.

Skills: Visual Basic · HiL · CANoe · PROVEtech:TA · Jira · MS Office · Basic German · English

R&D Aerospace engineer Internship November, 2022 - January, 2023

CIMSA Ingeniería de Sistemas

CIMSA Ingeniería de Sistemas is a world-class parachute company with activities in design and manufacturing of all kinds of parachutes and aerodynamic stabilizers.

- Developed an excel tool for the company to process data from the book "*Parachute Recovery Systems Design Manual, T.W. Knacke*".
- Provided suport to other departments in CAD.

STEM Tutor September, 2018 - July, 2022

7 D'Aventura

- I tutored STEM subjects to high school students, I helpd more than 50 people improve their academic performance.
- From this experience, I acquired communication skills and I have learned the value of being clear and organized while teaching.

VOLUNTEERING

Technical Engineer October, 2020 - May, 2022

Cosmic Research

Cosmic Research is made up of more than a dozen of university students from various technical backgrounds. It's a multidisciplinary team of volunteers fueled by the dream of reaching space. Developing low-cost suborbital rockets for science applications and educational purposes.

October, 2020 - September, 2021

Started in the ground segment department as a mechanical engineer working on the launch pad systems, logistics, and associated risks of the Bondar Mission, the most powerful supersonic rocket made by students in Spain.

ACHIEVEMENTS

- I helped to reduce the amount of time needed to assemble the launch pad from 2:45 h to 1:30 h.
- In November 2021 we carried out the Bondar Mission without any incidents.
- We designed and tested with FEM and analytical methods several pieces of the launchpad in order to improve its performance.
- We did a structural analysis of the launchpad to ensure structural stability and detect possible failure modes.

September, 2021 - May, 2022

I became the coordinator of the ground segment department and also I was working in the avionics department for Christa Mission.

ACHIEVEMENTS

- We designed in Siemens NX the compartments where the avionics systems of Christa's rockets were attached.
- I participated in the welding process and design of the embedded avionics systems.
- We did several separation tests of the deployment of the parachute and the payload with pressurized CO2 loads.

October, 2020 - May, 2022

Besides, I was part of the press department, where my role was to design graphic material for the association.

ACHIEVEMENTS

- I designed the pieces of vinyl of Bondar and Christa rockets.
- We contacted different companies to establish sponsorships.
- I edited and produced some publications for the Instagram, Facebook, Linkedin, Twitter, and YouTube accounts of the association.

CERTIFICATES

First Cambridge Exam FCE / B2 October, 2022
Cambridge University Press & Assessment
ID : 500/2705/0

Basic Level In Occupational Risk Prevention (50h) October, 2021
ASPY Prevención
ID : 654964.2021.10.34896

Driver's license B May, 2021
Dirección General de Tráfico

PUBLICATIONS

Badia, A., Cantos, D., el Ghaib, A., Hidalgo, J., Martí, M., & Pena, A. (2022). Final testing, pre-launch activities, launch and post-launch analysis of a sounding rocket made by students in Spain. 4 th Symposium on Space Educational Activities Barcelona.

LANGUAGES

English, B2 French, A2
Catalan, Native Spanish, Native
Arabic, Native German, Beginner

TECHNICAL SKILLS

Problem-solving Creativity
Critical Thinking Perseverance

HOBBIES

Calisthenics Gym
Music Football