



JORGE CRUZ

MSc Mechanical Engineering

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SUMMARY

Results-oriented Engineer with experience in Research and Development in a technical field requiring knowledge on mechanical design, fluid mechanics and automation.

Accustomed to working in a small company environment where the ability to perform tasks in different areas is required, from project and orders management to design and assembly.

Knowledge seeker in various areas of expertise, now focusing on programming, IT and Network.

WORK EXPERIENCE

R&D Engineer , VisBlue Portugal

Mar 2019 - Nov 2023

- Collaborated in the development of a new generation of vanadium redox flow batteries.
- Spearheaded the design of stacks for batteries and definition of production processes.
- Developed work related to product conception and design, communication with suppliers and partners, creation of technical drawings and assembly ideation.

Research Grant, Faculdade de Engenharia da Universidade do Porto

Oct 2017- Mar 2019

- Developed the mechanical design of a vanadium redox flow battery system comprising three stacks of 10kW and all the hydraulic circuit needed.
- Actively contributed to the definition of the state-machine design and the general behavior of the battery system (BMS).

EDUCATION

Programming Student

Aug 2023 - Present

42 Porto

- Leveraging a new concept of school, developed knowledge in programming and system administration, following a challenging program based on project development.
- Acquired competence in C, C++, Linux, Docker

Master of Science in Mechanical Engineering

Sep 2012 - Oct 2017

Faculdade de Engenharia da Universidade do Porto

- Specialization in Automation
- Thesis on "Development of an active transfemoral prosthesis"
- Final Grade 17/20 - Grade A

OTHER EXPERIENCES

Participation in Hackathons (in teams):

- **Caetano Bus (Jul 2024):** BD2Interface – Database for production planning (focused on Django and React)
- **Google Cloud (Jun 2024):** Leveraging AI for Portugal - Smart Agent to aid hospital triage (focused on using Google Cloud services and Python)
- **Vicaima (May 2024):** HR Performance Dialogue Platform (focused on Django and CSS)
- **BA Glass (Feb 2024):** Data analysis on the impact of production events on the throughput(focused on using Google Cloud services and Python)

ADDITIONAL INFORMATION

- **Technical Skills:** Automation, Mechanical Design, SolidWorks, Inventor, Programming
- **LeetCode:** (leetcode.com/u/JorgeCruz)
- **TryHackMe:** 39 Rooms completed (tryhackme.com/p/tonibik)
- **Languages:** Portuguese, English