

# HUGO COSTA

OFFSHORE RENEWABLE  
ENERGY STUDENT

## PERSONAL INFORMATION

🇵🇹 Nationality: Portuguese  
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## ABOUT ME 🙌

Mechanical Engineering graduate currently completing an MSc in Offshore Renewable Energy, with a strong interest in offshore systems, digital innovation, and sustainable energy markets. Passionate about the energy transition, I combine technical insight with an economic perspective to explore smarter, net-zero solutions.

## Projects ⚡

Hybrid Wind-Wave Floating Platform for Fiji (MSc Dissertation)

- OWCs performance analysis under varying design and sea state conditions
- Investigating full platform behaviour through lab testing with regular and irregular waves

Ship-to-Ship Transfer Detection via Satellite & ML

- Used Copernicus Browser to identify maritime oil transfer patterns
- Applied machine learning with Roboflow: image annotation, augmentation, and YOLO-based object detection

SDG Mobility Programme – Net Zero Malaysia

- One-month interdisciplinary programme on energy transition and SDG innovation.
- Worked with academic, government, and industry stakeholders on sustainability strategies

## SKILLS 🛠️

- Languages: English, Spanish, Portuguese
- Software: Excel, Word, PowerPoint, Bloomberg Terminal
- Data & Modelling: Orcaflex, Ansys, CAD, MATLAB, RStudio, Roboflow, QGIS
- Control & Automation: Siemens, Omron, Rockwell
- Electrical & Mechanical Systems: Pneumatics, Hydraulics, Electrical systems

## EDUCATION 🎓

### MSc in Offshore Renewable Energy

University of Plymouth | 2024 - September 2025

- Economics, Law and Policy for Offshore Renewable Energy
- Mechanics of Offshore Renewable Energy Systems
- Remote Sensing & GIS
- Applied Marine Autonomy

### BEng in Mechanical Engineering 2:1

Coventry University | 2020 - 2024

- Solid Mechanics and Dynamics
- Electrical Science
- Analytical Modelling
- Clean Energy
- Financial Trading and Investment (Bloomberg)

### Technological Specialisation Course in Automation, Robotics and Industrial Control

ATEC - Academia de Formação | 2018 – 2020 |

European Qualification Level 5

- Industrial automation (Siemens)
- Industrial control and Instrumentation
- AHK Certificate (German Chambers of Commerce Abroad)

## PROFESSIONAL EXPERIENCE 🛠️

### Advanced Air Mobility Intern

CEIIA - Centre of Engineering and Product

Development | September 2022 – February 2023

- UAV Parachute Recovery System Project
- UAS Flight Termination System Project
- IP (intellectual property) and patent analysis
- Market research for UAS technologies

### Biomedical Equipment Technician

CEIIA - Centre of Engineering and

Product Development |

June 2020 – August 2020

- COVID-19 Ventilator quality control
- Pneumatic sensors and valves (Piezoelectric technology) installation and monitoring
- Production planning (KAIZEN implementation)

### Automation Technician Intern

Make Industry | September 2019 – February 2020

- PLC programming (Rockwell Automation)
- Project design and development
- Client-facing project optimisation

### Summer Jobs | 2018 - Present

Fish farm worker (Iceland), bartender, warehouse operative, and restaurant waiter. Built resilience, adaptability, and teamwork while balancing studies with seasonal and part-time work.