



Ícaro Aragão Fonseca

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● WORK EXPERIENCE

03/2023 – CURRENT Bærum, Norway

BUSINESS TECHNOLOGIST HECLA EMISSIONS MANAGEMENT

- Created product roadmaps based on internal vision and customers' feedback. Prepared documents and mock-ups used as input for design analyses and feature development.
- Oversaw data integrations with external systems. Developed some of the data pipelines keeping internal databases updated myself.
- Assisted the operations team on inputting data into internal systems, on establishing processes to that aim, and performed ad hoc data corrections or adjustments when needed.
- Documented product knowledge to ensure shared understanding among stakeholders.
- Enabled communication between units to deploy cloud resources needed for development and to ensure they were compliant with company's policies.

08/2023 – CURRENT

ADJUNCT ASSOCIATE PROFESSOR NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

- Assisting writing of research papers and reports by scoping and refining topics, contributing to writing, and providing feedback.
- Contributing to writing of grant proposals to raise funds for new research and teaching projects.
- Acting as evaluator for MSc theses in the department and as peer-reviewer to related conferences.
- Co-supervising one PhD candidate.

01/2022 – CURRENT Bærum, Norway

BUSINESS TECHNOLOGIST WILHELMOSEN SHIP MANAGEMENT

Seconded to Hecla Emissions Management to assist establishing their digital product.

- Developed models for monitoring of vessel energy performance and environmental compliance, such as CII, EU ETS, and engine utilisation.
- Interacted with customer's representative to understand their needs regarding performance monitoring, then wrote and rolled out custom scripts to address these needs.
- Oversaw and further developed integration of related systems (data pipelines, APIs, web scraping).
- Specified and tested web-based user interfaces.

11/2019 – 01/2020 São Paulo, Brazil

VISITING RESEARCHER (ACADEMIC EXCHANGE) NUMERICAL OFFSHORE TANK (TPN)

- Developed a web-based digital twin wave basin as part of my PhD thesis.
- Link to app: https://shiplab.github.io/dt_cv/basin_demo.html.

02/2018 – 04/2018 London, United Kingdom

VISITING RESEARCHER (ACADEMIC EXCHANGE) UNIVERSITY COLLEGE LONDON

Developed a few web apps for resistance simulation and optimisation during early stage ship design as part of my MSc thesis. Stay within the Marine Research Group, Mechanical Engineering Department.

08/2017 – 01/2018 Ålesund, Norway

RESEARCH ASSISTANT SHIP DESIGN AND OPERATION LAB, NTNU

(~7.5 hours/week)

- Documented Vessel.js, a web-based open source library for early stage ship design.
- Developed apps for hydrostatic and stability calculations with Vessel.js.
- Link to library: <https://shiplab.github.io/vesseljs/>.

08/2015 – 02/2016 Ipojuca, Brazil

ENGINEERING INTERN VARD PROMAR

(30 hours/week)

08/2014 – 06/2015 Ålesund, Norway

RESEARCH INTERN SHIP DESIGN AND OPERATION LAB, ÅLESUND UNIVERSITY COLLEGE

(~7.5 hours/week)

● **EDUCATION AND TRAINING**

08/2018 – 11/2022 Ålesund, Norway

DOCTOR OF PHILOSOPHY IN OCEAN OPERATIONS Norwegian University of Science and Technology

- Co-supervised three master students.

Thesis A Standards-Based Approach to Modelling of Digital Twin Ship Data — Assessment of current standards and methods for future standardisation

08/2017 – 06/2018 Ålesund, Norway

MASTER OF SCIENCE IN SHIP DESIGN Norwegian University of Science and Technology

Thesis An Open Source Taxonomy for Simulation of Marine Operations

07/2010 – 10/2016 Recife, Brazil

ENGINEER DIPLOMA IN MARINE ENGINEERING / NAVAL ARCHITECTURE Federal University of Pernambuco

- 5 year engineering degree, extended in 1 year due to academic exchange at NTNU.

Thesis Compatibilisation of Software for Optimising Moonpool Shape with Respect to Operational Performance

08/2014 – 06/2015 Ålesund, Norway

EXCHANGE PROGRAM IN SHIP DESIGN Norwegian University of Science and Technology

- Academic mobility corresponding to the first year of Ship Design MSc program at former Ålesund University College, now NTNU in Ålesund.

11/2023

AZURE FUNDAMENTALS Microsoft

Website <https://learn.microsoft.com/api/credentials/share/en-us/caroFonseca-1510/72059E1C0D2D4219?sharingId=4E4AB9806E2DB81F>

12/2017

CALTECHX: LEARNING FROM DATA (INTRODUCTORY MACHINE LEARNING) edX

Website <https://courses.edx.org/certificates/a67905364aa646ed80fa97a101ce6e9b>

● **PROJECTS**

08/2023

Smart European Shipbuilding (SEUS)

Contributing with the SEUS project as Adjunct Associate Professor at NTNU.

Link <https://cordis.europa.eu/project/id/101096224>

● **DIGITAL SKILLS**

Python | JavaScript | HTML | SQL | Git | Machine Learning (basics) | ISO 19848 | ISO 19030

● **PUBLICATIONS**

[ORCID ID: 0000-0003-0189-2576](#)

● **HONOURS AND AWARDS**

05/2024

The Wakeham Prize - Royal Institution of Naval Architects

Prize awarded yearly to best general paper in the International Journal of Maritime Engineering by an author aged 35 or under.

Link <https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3120531>

08/2014

Science without Borders - Scholarship - CAPES and Equinor

Scholarship to cover stay of one academic year at former Ålesund University College, now NTNU in Ålesund.

12/2011

Human Resources Program for Shipbuilding PRH-PB04 - Scholarship - Petrobras

Scholarship for research initiation during undergraduate studies.

● **LANGUAGE SKILLS**

Mother tongue(s): **PORTUGUESE**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
NORWEGIAN	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **NETWORKS AND MEMBERSHIPS**

09/2020 – CURRENT Royal Institution of Naval Architects

Associate Member

12/2018 – CURRENT Teknisk-naturvitenskapelig forening

Medlem
