Ícaro Aragão Fonseca

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Date of birth: 24/09/1993 **Nationality:** Brazilian

WORK EXPERIENCE

[03/2023 – Current] **Business Technologist**

Hecla Emissions Management

City: Bærum | **Country:** Norway

• 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

• Collaborating with the Smart European Shipbuilding (SEUS) project.

• Co-supervising one PhD candidate.

[01/2022 – Current] **Business Technologist**

Wilhelmsen Ship Management

City: Bærum | **Country:** Norway

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] **Visiting Researcher (Academic Exchange)**

Numerical Offshore Tank (TPN)

City: São Paulo | **Country:** Brazil

• 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]

Visiting Researcher (Academic Exchange)

University College London

City: London | **Country:** United Kingdom

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]

Research Assistant

Ship Design and Operation Lab, NTNU

City: Ålesund | **Country:** Norway

(~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]

Engineering Intern

VARD Promar

City: Ipojuca | **Country:** Brazil

(30 hours/week)

[08/2014 – 06/2015]

Research Intern

Ship Design and Operation Lab, Ålesund University College

City: Ålesund | **Country:** Norway

(~7.5 hours/week)

EDUCATION AND TRAIN-ING

[08/2018 – 11/2022]

Doctor of Philosophy in Ocean Operations

Norwegian University of Science and Technology

City: Ålesund | **Country:** Norway | | **Thesis:** A Standards-Based Approach to Modelling of Digital Twin Ship Data — Assessment of current standards and methods for future standardisation

• Co-supervised three master students.

[08/2017 – 06/2018]

Master of Science in Ship Design

Norwegian University of Science and Technology

City: Ålesund | **Country:** Norway | | **Thesis:** An Open Source Taxonomy for Simulation of Marine Operations

[07/2010 – 10/2016]

Engineer Diploma in Marine Engineering / Naval Architecture

Federal University of Pernambuco

City: Recife | **Country:** Brazil | | **Thesis:** Compatibilisation of Software for Optimising Moonpool Shape with Respect to Operational Performance

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

[08/2014 – 06/2015]

Exchange Program in Ship Design

Norwegian University of Science and Technology

City: Ålesund | **Country:** Norway |

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

[12/2017] **CaltechX: Learning From Data (Introductory Machine Learning)**

edX https://courses.edx.org/certificates/a67905364aa646ed80fa97a101ce6e9b

DIGITAL SKILLS

My Digital Skills

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

PUBLICATIONS

ORCID ID: 0000-0003-0189-2576

LANGUAGE SKILLS

Mother tongue(s): Portuguese

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Norwegian

LISTENING B1 **READING** B1 **WRITING** B1

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B1

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

HONOURS AND AWARDS

[08/2024] **Science without Borders - Scholarship Awarding institution:** CAPES and Equinor

[12/2011] **Human Resources Program for Shipbuilding PRH-PB04 - Scholarship Awarding institution:** Petrobras

NETWORKS AND MEM-BERSHIPS

[09/2020 – Current] **Associate Member** Royal Institution of Naval Architects

[12/2018 – Current] **Medlem** Teknisk-naturvitenskapelig forening

[02/2022 – Current] **Member** YoungShip Oslo