



Diogo Nuno Freitas

Date of birth: 01/10/1996 | **Nationality:** Portuguese | **Gender:** Male |

(+351) 968673575 | diogo.nt.freitas@gmail.com |

Skype: diogo.nuno.teixeira.freitas |

Av. Madalena, no. 136, Edf. Jardins da Madalena 2 blc. B 4C, 9020-330, Funchal, Portugal

● WORK EXPERIENCE

2021 – CURRENT

RESEARCH FELLOW – FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA (FCT)

PhD research studentship.

2021 – 2022

INVITED ASSISTANT – UNIVERSITY OF MADEIRA

Teaching the courses of Programming Paradigms and Advanced Programming.

2020 – 2021

RESEARCH ASSISTANT – INTERACTIVE TECHNOLOGIES INSTITUTE - LARSYS

- Sports activity monitoring;
- Imaging and signal processing;
- Development of Artificial Intelligence tools;
- Server management;
- Support in the development of an Android application.

2018 – 2020

PROGRAMMER – ASSECO PST

- Development of banking solutions;
- Development of internal tools.

Funchal, Portugal

15/06/2016 – 15/09/2016

SUMMER INTERNSHIP – NEUROREHABLAB (M-ITI)

- Collaboration with other students/researchers from other cycles and areas of studies,;
- Content management;
- Development of an online portal;
- Development of games using non-invasive technologies.

Funchal, Portugal

● EDUCATION AND TRAINING

2021 – CURRENT

PH.D. IN INFORMATICS ENGINEERING – University of Madeira

Field(s) of study

- Artificial Intelligence;
- Belief revision.

2017 – 2020

MASTER'S DEGREE IN MATHEMATICS, STATISTICS AND APPLICATIONS – University of Madeira

- Computational Statistics;
- Foundation and Applied Combinatorics;
- Mathematical Models;
- Statistic Complements;
- Optimization.

Thesis: Nature-Inspired Algorithms for Solving Some Hard Numerical Problems.

17 | EQF level 7

2014 – 2017

BACHELOR IN INFORMATICS ENGINEERING – University of Madeira

- Artificial Intelligence;
- Computer Architecture;
- Data Structures and Algorithms;
- Database Management Systems;
- Object-oriented Programming;
- Operating Systems;
- Programming Paradigms;
- Requirements Engineering;
- Software Processes and Metrics.

Thesis: EmoCam: Capturing Emotions Using Non-Invasive Technologies

16 | EQF level 6

2011 – 2014

COMPUTER TECHNICIAN COURSE – Associação Promotora do Ensino Livre (APEL)

- Computer Applications;
- Computer Technologies;
- Database Management Techniques;
- Internship (in this case, in the Departamento de Educação Física e Desporto, specifically in the Laboratório de Crescimento Físico Humano e Desenvolvimento Motor, at University of Madeira);
- Technological Project.

EQF level 3

● PUBLICATIONS

Scientific Research Publications

- Freitas, D., Paulino, T., Bermúdez i Badia, S., Llorens, R., & Deutsch, J. E., "Open Rehab initiative: Second development iteration," in *Proc. of the International Conference on Virtual Rehabilitation (ICVR)*, (Montreal, CA, USA), pp. 1–2, June 2017.
- D. Freitas, L. G. Lopes, & F. Morgado-Dias, "A neural network based approach for approximating real roots of polynomials," in *Proc. of the International Conference on Mathematical Applications (ICMA)*, (Funchal, Portugal), pp. 44–47, July 2018.
- Mendonça, A., Brazão, P., Nascimento, A., & Freitas, D., "Estereótipos de género entre os estudantes da formação de professores em educação infantil (0-10 anos): Estudo de caso na universidade da madeira," *Ensaios Pedagógicos*, vol. 3, no. 3, pp. 96–106, Sept. 2019.
- D. Freitas, L. G. Lopes, & F. Morgado-Dias, "Particle swarm optimisation: A historical review up to the current developments," *Entropy*, vol. 22, p. 362, Mar. 2020 (IF=2.419, Q2).
- D. Freitas, F. Morgado-Dias, & A. Ribeiro, "Things you need to know if you are writing a scientific paper, thesis or report in Engineering or Science," *TechRxiv*, Aug. 2021.
- D. Freitas, L. G. Lopes, & F. Morgado-Dias, "A neural network-based approach for approximating arbitrary roots of polynomials," *Mathematics*, vol. 9, p. 317, Feb. 2021 (IF=1.747, Q1).
- Mendonça, F., Mostafa, S. S., Freitas, D., Morgado-Dias, F., & Ravelo-García, A. G., "Multiple time series fusion based on LSTM: An application to CAP A phase classification using EEG," *arXiv preprint arXiv: 2112.11218*, Dec. 2021.
- Mendonça, F., Mostafa, S. S., Freitas, D., Morgado-Dias, F., & Ravelo-García, A. G., "Heuristic optimization of deep and shallow classifiers: An application for electroencephalogram cyclic alternating pattern detection," *Entropy*, vol. 24, p. 5, May 2022 (IF=2.524, Q2).

● HONOURS AND AWARDS

2022

Academic merit scholarship – Huawei, in partnership with .pt

Programa de Bolsas Huawei—worth €5,000.

● VOLUNTEERING

2018 – CURRENT

Event manager

GDG Madeira

- Technology conference organizer;
- Trainer in programming workshops.

2016 – CURRENT

Event organizer

Café Memória (Delegação da Madeira da Alzheimer Portugal)

- Contact with people, especially elders, with memory problems (Alzheimer's disease) or with dementia, and their caregivers;
- Event organization.

Project manager

Associação Académica da Universidade da Madeira (Students' Union)

- Collaboration on various projects (including the participation as a musician in the Fado group);
- Development of websites and online platforms;
- Events organization;
- President of the General Assembly and Secretary of the Board;
- Head of the IT department.

● LANGUAGE SKILLS

Mother tongue(s): **PORTUGUESE**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	B2	B2	B2	C1

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

● COURSES

Courses

- **"First Aid", organized by SESARAM.**
- **"Cardiopulmonary resuscitation with automated external defibrillator", organized by Madeira Emergência.**
- **Initial Pedagogical Professional Training Course (CCP n.º F723295/2022).**
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- "Tecnologias Wolfram", organised by Wolfram Research and University of Madeira.
- "II Workshop Matemática - A Matemática e as Outras Ciências, as Outras Ciências e a Matemática", organized by Departamento de Matemática da Universidade da Madeira.
- "Conflitos nos trabalhos de grupo - Como gerir?", organized by Serviço de Psicologia da Universidade da Madeira.
- "Ansiedade nas apresentações orais: Como gerir?", organized by Serviço de Psicologia da Universidade da Madeira.