

Eduardo Fernandez del Peloso

Nationalities: Brazilian and French

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PROFESSIONAL EXPERIENCE

Senior systems analyst

Instituto de Ciências Náuticas, Rio de Janeiro, RJ, Brazil

May 2013 – Today

November 2010 – October 2011

Tasks: Development of electronic chart, radar and ship simulators for naval training, in C#.

Laboratório Interinstitucional de e-Astronomia, Rio de Janeiro, RJ, Brazil

November 2011 – April 2013

Tasks: Development of software for the reduction, visualization and analysis of astronomical data, in Python.

Software development supervisor

Tasks: Development of naval engineering software systems, in C, C++ and Dynamic C (for real-time control).

Marine Production Systems do Brasil Ltda., Rio de Janeiro, RJ, Brazil

April 2008 – October 2010

Symmetry Ltda., Rio de Janeiro, RJ, Brazil

October 2006 – March 2008

Astronomy postdoctoral researcher

Tasks: Stellar and Galactic astrophysics research.

Observatório Nacional, Rio de Janeiro, RJ, Brazil

October 2004 – September 2006

Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brazil

October 2003 – September 2004

Reactor physicist

Eletróbrás Termonuclear S.A., Angra dos Reis, RJ, Brazil

October 1997 – February 2001

Tasks: Technical support to the operation of nuclear power plant reactors.

EDUCATION

Data Structures and Algorithms Specialization

University of California, San Diego, CA, USA (online, through Coursera)

Expected conclusion: December 2018

MSc IT in Software Architecture

Instituto Infnet, Rio de Janeiro, RJ, Brazil

Expected conclusion: May 2018

Data Science Specialization (click [here](#) for more info and to view the diploma)

Johns Hopkins University, Baltimore, MD, USA (online, through Coursera)

September 2016

Statistical Learning Course (click [here](#) to view the diploma)

Stanford University, Stanford, CA, USA (online, through Stanford Online)

April 2016

Specialization in Mechatronics Engineering (click [here](#) to view the diploma)

Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil

November 2010

PhD in Astronomy (click [here](#) to view the diploma)

MSc in Astrophysics (click [here](#) to view the diploma)

Observatório Nacional, Rio de Janeiro, RJ, Brazil

September 2003 and May 1996, respectively

BSc in Physics (click [here](#) to view the diploma)

Pontifícia Universidade Católica do Rio de Janeiro, Rio de Janeiro, RJ, Brazil

August 1994

KNOWLEDGE IN SOFTWARE DEVELOPMENT

- Advanced programming in C#, C++, C, Dynamic C (for real-time control) and Python.
- Intermediate programming in R.

KNOWLEDGE IN DATA SCIENCE

Basic to intermediate knowledge on the following topics, acquired taking Johns Hopkins' online Data Science Specialization (through Coursera) and Stanford's online Statistical Learning Course (through Stanford Online), as well as other forms of self-study:

- Linear regression: least squares, ridge regression, Lasso.
- Non-linear regression: polynomial, step functions, splines, local regression, generalized additive models.
- Trees, bagging, boosting, random forests.
- Classification: KNN, logistic regression, linear discriminant analysis, support vector machines, naïve Bayes.
- Unsupervised learning: principal component analysis, clustering.

SOFTWARE DEVELOPMENT AND DATA SCIENCE SHOWCASE

Pipeline to analyse stellar spectra obtained by the SDSS-III MARVELS Survey, composed of three modules programmed in C. The first module normalizes a spectrum, the second one measures equivalent widths of atomic absorption lines in the normalised spectrum, and the third one determines the stellar fundamental atmospheric parameters from the equivalent widths.

Electronic Chart Display and Information System Simulator (ECDIS Simulator) programmed in C#. The simulator is the first one in Brazil to be certified by an international certification body and classification society. It was certified as class S Maritime Simulator by DNV GL (Det Norske Veritas / Germanischer Lloyd) in 2017. Click [here](#) to view the statement of compliance.

Word prediction application as the capstone of the online data science specialization offered by Johns Hopkins University through Coursera. It was programmed in R and can be tested by clicking [here](#).

SUCCESSFUL DATA SCIENCE BOOTCAMP APPLICATIONS

Data Science Retreat

Selected to attend batch 11. Location and date: Berlin, Germany, June 2017. Duration: 3 months. Cohort size: 5 to 10 people. Click [here](#) for more details.

BaseCamp

Selected to attend batch 2. Location and date: Vienna, Austria, June 2017. Duration: 2 months. Cohort size: 8 to 10 people. Click [here](#) for more details.

SCIENTIFIC PUBLICATIONS

7 papers published in international, peer-reviewed astronomy journals (Astrobiology, A&A and MNRAS), being 5 as PI. See <http://www.delpeloso.com.br> for a list and links to the complete texts.

FOREIGN LANGUAGES

◆ Knowledge (levels A1 = beginner, A2, B1, B2, C1 and C2 = fluent)

	Writing	Reading	Speaking	Listening
English	C1	C2	C1	C1
French	B1	B2	B1	B1
Spanish	B1	B2	B1	B2
German	A1	A1	A1	A1

◆ Diplomas

Certificate of Proficiency in English
University of Michigan, Ann Arbor, MI, USA
November 1986

PROFESSIONAL AFFILIATIONS

International Astronomical Society
Member since 2006.

Sociedade Astronômica Brasileira
Member since 1995.