Nuno Silva

Deep Learning and Embedded Software Engineer

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EXPERIENCE

ProjectAppia, Netherlands — *Deep Learning Engineer*

September 2016 - PRESENT

Development of a deep neural network that successfully can detect human epileptic seizures directly on raw intracranial electroencephalography (iEEG) data.

Lockheed Martin Commercial Flight Training, Netherlands — *Software Engineer*

September 2013 - PRESENT

C++ real-time embedded software development for data acquisition systems, interfacing with aircraft hardware. C++ real-time software development of low latency, distributed systems for full flight simulators.

Institute for Plasma and Nuclear Fusion, Portugal — *Researcher*

December 2011 - July 2013

Development in Matlab of a scenario simulator for the fusion reactor ITER and path following algorithms for 100Ton autonomous vehicles.

EDUCATION

Google, Udacity — *Deep Learning*

2016

Train and optimization of deep convolutional and recurrent neural networks in Tensorflow. Image and text recognition.

Stanford University, Coursera — *Machine Learning*

2016

Supervised and unsupervised learning applied to data, text and image.

TU Lisbon, Portugal — *MSc Aerospace Engineering (Avionics)*

2005 - 2011

Dissertation: "Synchronous wound-rotor electrical machine control for electric airplane taxiing" - extensive dsPIC® programming in C.

PROJECTS

SKILLS

Programming Languages
C++, C, Python, Go

Machine Learning
Tensorflow (Python), Google Cloud, AWS

Libraries and tools
STL, Boost, ZeroMQ, Docker

Numerical
Matlab, Simulink

Versioning
SVN, Git

Development Methods
Agile, Jira

Active working topics
Neural Networks, Reinforcement Learning, multi-threading, kernel scheduling, embedded systems, electronics.

AWARDS

LMCFT Exceptional Performance Award 2015
Distinguished for performance in B777 project.

Vestas Global Winnovation 2009 One of 40 global finalists. Case studies solving.

ProjectAppia, own

April 2016 - PRESENT

Research and implementation of the most recent deep learning approaches in the fields of healthcare, agriculture and logistics to build an open machine learning platform to positively contribute to the world.

Boeing 777 Full Flight Simulator for Lufthansa Training, LMCFT

October 2013 - November 2015

Real-time software development for a B777 flight simulator in C++. System development, integration and testing. Experience in interfacing with real aircraft hardware and ARINC 429/629 communication protocols. Development of embedded software for real ARINC 629 hardware.

Data Acquisition System for Real Aircraft, LMCFT

May 2015 - December 2016

Real-time embedded software development for data acquisition systems: ARINC 429/629/708, CAN, Analog IO, Digital IO and Serial.

Project Shell Eco-Marathon, University

2007 - 2010

Coordinator of the propulsion department. Student-only extracurricular activity where it was designed and built a hydrogen powered electric vehicle for the Shell Eco-Marathon race. In 2009 2nd best Iberian Result and winners of Murcia Solar Race. In 2010 best hydrogen Iberian result.

PUBLICATIONS

Path Following Control of Rhombic Like Vehicles: Performance Assessment with Dynamic Vehicle Model

N. Silva, A. Vale and L. Baglivo

ICINCO2013, Reykjavík, Iceland, 29 to 31 July 201

Four New Path Following Controllers for Rhombic Like Vehicles

N. Silva, L. Baglivo, A. Vale, M. De Cecco

ICRA 2013, Karlsruhe, Germany, 6 to 10 May 2013

Modeling, Simulation and Hardware Implementation of a Lundell Machine Controller with Three-phase Inverter Bridge

N. Silva, D. Silva, H. Fernandes

SMACD 2012, Seville, Spain, 19 to 21 Sep 2012.

European BEST Engineering Competition 2009 Team won Procter&Gamble case study.

LANGUAGES

Portuguese
Native

English
Fluent (First Certificate in English, University of Cambridge)

French, Catalan, Spanish
Average