

Profile

September 5, 2019

Nuno A. C. Henriques

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PhD student in Cognitive Science

at University of Lisbon

Currently on machine learning applied to Cognitive Science studies. Using state-of-the-art algorithms and techniques ranging from data sampling engineering to automated adaptation (AutoML). Real full-stack development from mobile app to Cloud (Web) services, i.e., from user interaction to machine data crunching and learning services towards prediction.

Tourism of Portugal (Ministry of Economy) amongst traceable **achievements**: (a) One order of magnitude data centre power reduction; (b) While increasing processing power and storage; (c) Digital transformation from paper to Web apps, dozens of services for tourism agents (entrepreneurs); (d) Coach and lead by example team members on pursuing more knowledge and qualifications for better delivery; (e) Tourism rose several GDP percentual points during our watch.

1 Activity (relevant)

PhD student, researcher and engineer

BioISI — Sciences/*ULisboa campus*, Lisbon, Portugal. 2012–2013, 2016–.

Researching about human emotions, reasoning, common sense, cognitive science using an artificial agent in georeferenced, time-based, context. Engineering data, selecting features, doing machine learning towards prediction of emotional valence changes on humans. Develop a distributed, fault-tolerant, mobile and Cloud-based platform from scratch as a research tool to continuously, online, gather and process data.

IT Architect and Software Engineering Consultant

Information Systems Unit (*USI*) — Instituto de Medicina Molecular. Medicine/*ULisboa campus*, Lisbon, Portugal. September 2013 – March 2015.

IT Architect and Software Engineering Manager

Department of Technology (*DT*) — Tourism of Portugal. TP Headquarters, Lisbon, Portugal. April 2009 – March 2011.

Consultant Engineer (Web Coordinator: 2005–2007)

Rectory Informatics Office (*GIR*) — UNL. UNL Rectory, Lisbon, Portugal. 2005 – 2009.

Engineer and Project Quality Manager

Critical Software, SA. Aerospace Sector. Portugal. August 2004 – February 2005.

2 Academic history + certifications (relevant)

Doctoral Program in Cognitive Science at the University of Lisbon (*ULisboa*). Four-year degree. Grade (one-year lectures, advanced studies): 16/20. Three-year PhD research and thesis, on-going (*ULisboa* PhD grant since May 2016). Lisbon, Portugal. 2012–2013, 2016–.

Machine Learning by Stanford University on Coursera. Andrew Ng. Certificate earned on December 11, 2015. Grade: 100%. Verified certificate.

MSc in Informatics Engineering at the Faculty of Sciences and Technology of the New University of Lisbon (*FCT/UNL*). Two-year degree. Grade: 17/20 (first-year lectures); “Very Good” (second-year dissertation, top grade by unanimous decision). Lisbon, Portugal. 2005.

Graduation in Informatics Engineering at the FCT/UNL. Five-year degree. Grade: 14/20. Lisbon, Portugal. 2002.

3 Projects (relevant)

- SensAI+Expense** | Towards an artificial empathetic companion to humans. Using an Android application as a PhD research tool to enable interaction between humans and an artificial agent using mobile devices. The agent resources (e.g., machine learning, storage) are Cloud-expanded. August 2017 –.
- Technology: Android; Java; Debian GNU/Linux; Python (`hdbscan`, `matplotlib`, `numpy`, `pandas`, `psycopg2`, `scikit-learn`, `scikit-optimize`, `tensorflow`, `xgboost`); PostgreSQL; Apache HTTP server + WSGI + Flask.
- Repository: (a) <https://gitlab.com/nunoachenriques/sensei-expense>;
(b) <https://gitlab.com/nunoachenriques/sensei>
- INTROBOT** | A new multipurpose robot with autonomous and human operated navigation and surveillance capabilities. Mixed reality interface and algorithms to trail and track with camera feed and GPS map. Collaboration: LabMAG, INTROSYS, UNINOVA. August 2011 – September 2012.
- Technology: Ubuntu GNU/Linux; ROS; OpenCV; C++; Qt; JavaScript; Google Maps; GPS; Live RT video camera.
- TP Service Bus** | Tourism of Portugal applications' hub. Critical for the organization to assure proper interoperability between applications' services towards an agile dashboard. July 2010 – March 2011.
- Technology: Debian GNU/Linux; PostgreSQL; Java; WSO2 ESB; REST; SOAP.
- Entitas** | Temporal (past, present, and future aware using PostgreSQL `infinity` special value), limitless and shared database of unique entities (companies and persons). Critical for the organization to assure proper interoperability between applications entities and associated contacts. September 2009 – March 2011 (Tourism of Portugal), 2014–2015 (IMM).
- Technology: DBDesignerFork; Debian GNU/Linux; PostgreSQL; Java; WSO2 AS; Apache HTTP server.
- TP IT Governance** | Open standards orientation for the development team leaders in order to assure proper interoperability between applications. Department portfolio encompass tens of projects and several platforms including OutSystems Agile, Oracle IAM, WSO2 SOA Platform, Google Gadgets. April 2009 – March 2011.
- Technology: Web Open standards (W3C); Sharing documentation and collaboration (Web 2.0); ...
- TP IT Architecture and Engineering** | Reengineering of the data centre and applications technology architecture to assure proper governance and energy efficiency with less resources usage footprint. April 2009 – March 2011.
- Technology: Blades; Virtual servers; Central storage; Fault tolerance; Sharing and reorganizing documentation; Debian GNU/Linux; ...
- Business Intelligence** | Data indicators for top level management. September 2008 – July 2009.
- Technology: Pentaho; Tomcat; PostgreSQL; Plone/Zope; Java; Python; XML...
- UNL Portal (incl. several sub-sites)** | New Web platform. January 2006 – July 2009.
- Technology: Plone/Zope; Python; XHTML+CSS; BASH Script; REST.
- MovieGene** | A multimedia production system using Evolutionary Computation. 2004–2005.
- Technology: Java 1.5 (JMF, Threads, AWT and Swing). ECJ 12 evolutionary library.
- HICOD2000** | Project Engineer and Quality Manager. September 2004 – March 2005
- Technology: C++; PHP; JPEG2000; BASH Script.
- EO-KES** | Project Manager and Research Engineer. September 2003 – December 2003.
- Technology: Java; Protégé; WordNet; XHTML+CSS.
- SPID** | Concept, development and maintenance of FCT/UNL Web pages search engine. 1998–2002.
- Technology: Java (*multithreaded*); PostgreSQL; PHP; XHTML+CSS.