Curriculum Vitæ

10 April 2024

Nuno A. C. Henriques

nunoachenriques.net

Developing socially conscious opportunities to creatively apply Sensory AI and more. A broad experience of 20+ years coding search engines, architecting information systems, engineering databases, Cloud, Web, and mobile development integrations. Also, on robotics software GPS-based navigation, live video human face detection, and IoT (mobile) sensors' data acquisition. Bridging state-of-the-art algorithms and techniques during the PhD thesis research towards automated machine learning, explainable, and efficient predictions in context regarding human emotional valence changes.

Achievements (PhD) A novel automated machine learning (AutoML) platform efficiently predicting bespoke human emotional valence in geolocation and time context. Available as a secure Cloud service.

Achievements (Tourism of Portugal) (a) one order of magnitude data centre power reduction; (b) while increasing processing and storage; (c) digital transformation from paper to Web apps towards entrepreneurs; (d) coached and lead by example on pursuing more knowledge and qualifications for better delivery; (e) tourism rose several GDP percentage points during our watch.

1 Academic history

PhD in Cognitive Science at Universidade de Lisboa. PhD's thesis entitled "SensAI+Expanse Prediction of Emotional Valence Changes on Humans in Context by an Artificial Agent Towards Empathy", advisors: Helder Coelho (Ciências/ULisboa) and Leonel Garcia-Marques (Psicologia/ULisboa). Four-year research, ULisboa PhD grant between May 2016 and April 2019, Approved with Distinction and Honours by unanimous decision. Advanced Studies course (first-year lectures, grade: 16/20). Lisbon, Portugal. 2012–2013, 2016–2020.

https://nunoachenriques.net/sensai+expanse/nachenriques-2020-phd-presentation.pdf
https://nunoachenriques.net/sensai+expanse/nachenriques-2020-phd-dissertation.pdf

MSc in Informatics Engineering at Faculdade de Ciências e Tecnologia / Universidade Nova de Lisboa. Master's thesis entitled "MovieGene: A multimedia production system using Evolutionary Computation", advisors: Luís Correia (Ciências/ULisboa) and Nuno Correia (FCT/NOVA). Two-year degree. Grade: 17/20 (first-year lectures); "Very Good" (second-year dissertation, top grade by unanimous decision). Lisbon, Portugal. 2005.

https://nunoachenriques.net/moviegene/nachenriques-2005-msc-presentation.pdf
https://nunoachenriques.net/moviegene/nachenriques-2005-msc-dissertation.pdf

Graduation in Informatics Engineering at Faculdade de Ciências e Tecnologia / Universidade Nova de Lisboa. Five-year degree. Grade: 14/20. Lisbon, Portugal. 2002.

gitlab.com/nunoachenriques | github.com/nunoachenriques
www.linkedin.com/in/nunoachenriques | www.researchgate.net/profile/Nuno_Henriques5

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2 Activity

Travel

Career break. January 2023–...

At the European Union centre, exploring and learning. The privilege of having time to travel (Paris, Brussels, Bruges, Ghent, Antwerp, Lisbon, Madeira, ...) read, think, and play in your own terms. Taking some time to advise friends and past clients as a pro bono senior consultant in innovation. A few short courses (e.g., https://www.deeplearning.ai/short-courses/) and some coding (https://gitlab.com/nunoachenriques) to keep up with the state-of-the-art in NLP (LLM, Chatbots, ...) and all-things data and AI.

Cognitive Innovation Lead

Axians. January 2022–December 2022

As an Innovation Senior Consultant, proposing mindset changes regarding data and event-driven architectures from C-level to base teams. Challenging the status quo on some approaches regarding data strategy and solutions for main clients and projects. Pushing for Cloud data platforms with the state-of-the-art open-source fit-for-purpose parts.

Pitching presales with top-level solutions (e.g., drone-based inspection of rotor blades) with data-driven architectures including computer vision and machine learning solutions.

All-things data and digital integration Architecture community lead.

Senior member of the AI and Machine Learning community contributing with solutions.

Mentoring young talents as a career and technical advisor.

Co-lead the seven full-day Sustainability workshops regarding technology solutions to better cope with United Nations Sustainable Development Goals.

Co-Founder // Chief Science and Technology Officer

Unsettled. March 2021–November 2021

A disruptive strategist delivering life-centred innovation driven by science and technology.

Providing fractional CTO services to solo entrepreneurs, large-size organisations, and public sector agencies: from innovative mobile applications to digital transformation towards Cloud data architectures. Reducing cost, promoting efficiency, and preparing for growth. Advising on change management and future perspectives regarding human talent and technology fast-pace change. Aiding the procurement and fit-for-purpose cost-effective solutions.

Growing Unsettled (now Innovation by Kaizen) from zero to one and exit in nine months with success.

Chief Artificial Intelligence Officer

MettaNoon. September 2020–September 2021

MettaNoon is a Sensory AI and Digital Transformation company.

Sensory AI amplifies multi-sensory human experiences, in digital and physical spaces.

We blend multi-sensory AI and human-centred experience design, applying sight, sound, behaviours, mobility, data and ethics to create a new generation of Sensory solutions and SaaS products for all industries that touch clients, consumers and workforces.

An international company, based in the UK and Portugal, we design bespoke solutions for our clients from a roster of capabilities: Advisory and Accelerator; Design Thinking and Design Studio; SaaS and PaaS Products and Development; Education and Training Academy; Ecosystem of world leading Partners.

Developing socially conscious opportunities to creatively apply Sensory AI, we inspire, solve problems and support humanity through revolutionary solutions and a new approach to blended capabilities.

We bring Sensory AI to life to amplify human brilliance for our friends, our communities and our planet.

Chief Technology Officer

Dengun. January 2021–June 2021

Providing fractional Chief Technology Officer services. Leading the strategy regarding the main aspects of technology development matching with business needs. This challenge included human talent mentoring and careers refactoring. Procurement and new productivity tools. Development teams P&L and presales pitching for international clients (e.g., US). The technology stack included AWS platform, Flutter (Dart) for mobile development, Django (Python), PostgreSQL, Redis for real-time scale-up projects, and much more.

Head of Engineering, Research and Development

Dengun. November 2020–December 2020

A strategic partnership to pave the way for Dengun's future intelligence in digital products. Pushing a transformational change driven by data, ethics, and sustainable growth with profit. Fractional Chief Technology Officer in residence.

PropTech Start-up Advisor

Unlockit. August 2020–January 2021

Unlockit is a seed-stage start-up and digital platform developed to be the only tool that real estate agents need to (a) be more productive; and (b) provide a differentiated experience in the market.

As an advisor, I provide technological advice, mentoring, and future perspectives.

The Unlockit team started pushing IaC with Terraform, PostgreSQL for data store, and Web3-based and mobile application for the smart contracts with Blockchain and Qualified Electronic Signatures. Integrations with Stripe for payments and DocuSign for identification verification on PDF documents.

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www.linkedin.com/in/nunoachenriques | www.researchgate.net/profile/Nuno_Henriques5

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PhD student, researcher, and engineer

BioISI — Ciências/ULisboa *campus*, Lisbon, Portugal. 2012–2013, 2016–2020.

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

(see section 4: p. 7, SensAI+Expanse)

IT Architect and Software Engineering Consultant

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

Introducing and developing IT best practices, security, architecture and software engineering management to a micro team with huge challenges at an institute with 500+ scientists and terabytes of critical data flowing in and out of the local SAN. Fostering governance of development team and platforms, strategic technology consultant merging ethics and sustainability.

Engineering and hands on for several core systems with Open technologies for Web services and databases, such as an application server and a service bus infrastructure (WSO2 SOA Platform AS and ESB) with several internal Cloud services (Java API), monitoring (Nagios) and backup (Bareos) services. All in a reengineered Xen virtualization platform. Improvement of Web sites and interfaces with HTML5 technology. Going for one level up of IT maturity in one year as a result (goal achievement).

(see section 4: p. 7, `Entitas`)

Robotics Research Engineer

LabMAg — Ciências/ULisboa *campus*, Lisbon, Portugal. August 2011–December 2012.

Software architecture over ROS, navigation, behaviour, and surveillance modules for a new all-terrain robot — INTROBOT. A mixed reality interface and algorithms to trail and track faces live with camera feed and GPS map.

The technological platform included Ubuntu GNU/Linux; ROS; OpenCV; C++; Qt; JavaScript; Google Maps; GPS; Live RT video camera.

(see section 4: p. 7, INTROBOT)

IT Architect and Software Engineering Manager

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

Main 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.

Information Technology Architecture and Software Engineering Management. Governance of development teams and platforms, strategic technology consultant merging ethics and sustainability. Department portfolio of tens of projects, several platforms including Out-Systems Agile, Oracle IAM, WSO2 SOA Platform, Google Gadgets. An engineering hands-on approach to several core systems with open standards for Web service and database.

Engineering hands-on for several core systems with open standards for Web and database, such as a service bus infrastructure with several internal Cloud services (Java API).

Conceived and directly developed a core information system: Entitas. Used Java, PostgreSQL, WSO2 ESB. Introduced the concept of records with timeline, delete and undelete, so the management of entities (e.g., person, company) is unified at one repository with a Web service interface.

Development of a Google Gadget Application to serve searches with geolocation, instantly, about available Portugal tourism offer (e.g., restaurant, golf, accommodation) from an old MSSQL database. Also, connected (developed in-house) to SMS (mobile texting) and email Web service enabling results saving to users' email and mobile phone.

(see section 4: p. 7, TP Service Bus; p. 7, `Entitas`; p. 8, TP IT Governance; p. 8, TP IT Architecture and Engineering)

Consultant Engineer (Web Coordinator: 2005–2007)

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

Platform engineering, interfaces and quality assurance. Maintenance and development of the portals hosted in the common platform.

(see section 4: p. 8, *NOVA Courses Catalogue*)

Web coordinator of the NOVA's *nova digital* project: implementation of a common Web content management platform. For renewal and integration of the NOVA's and FCT/NOVA's portal site, also the creation of NOVA's Bologna Process portal.

(see section 4: p. 9, *NOVA Portal*; p. 9, *FCT/NOVA Portal*; p. 8, Business Intelligence)

Engineer and Project Quality Manager

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

Several projects and responsibilities including internal advisement regarding Quality and Systems infrastructure issues.

(see section 4: p. 9, HICOD2000; p. 9, SCOS2000)

Research Engineer and Project Manager

CA^3 — Soft Computing and Autonomous Agents. UNINOVA, FCT/NOVA *campus*, Caparica, Portugal. August 2003–December 2003.

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(see section 4: p. 10, EO-KES)

Research Engineer and Project Manager

Computing and Informatics Services *(Serviço de Informática)* — FCT/NOVA *campus*, Caparica, Portugal. (*pro bono* 1995–1999) 1999–2003.

Pioneering and innovating the faculty Web services. Halt and Catch Fire moments: students Website, in-house developed search engine (twice), Internet access always growing bandwidth strategy and more.

Several projects and responsibilities including: faculty technology services strategy; jury member for computer acquisitions; systems administrator; Web sites administrator; researcher, database, and project engineer on the renewal of the old and development of the new services to the faculty departments including the counsels and the directorate.

Instructor and Directorate Advisor

ICTIS — Institute of Science, Technology e Innovation *(Instituto de Ciência, Tecnologia e Inovação)*. FCT/NOVA *campus*, Caparica, Portugal. 1998–1999.

Instructor under the WWW (XHTML+CSS and Web concepts) theme for graduation students of the FCT/NOVA, evaluated by the class as "Very Good". Responsible for the institute brand improvement (design, marketing and communication), development and implementation of the survey plan to evaluate instructors, students and short courses.

Consultant, Sales

INCALT, L.$^{\text{da}}$ — High Technology Consultancy and Research *(Investigação e Consultoria em Altas Tecnologias)*. FCT/NOVA *campus*, Caparica, Portugal. 1998–1999.

3 Specific courses

Advanced Course in Hierarchical Processing at Champalimaud Centre for the Unknown. Lisbon, Portugal. 18–20 September 2016. `http://courses.research.fchampalimaud.org/hierarchical-processing/`

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

Course of Informatics and Industrial Automation *(Curso de Informática e Automação Industrial)* by FUNDETEC. Grade: "Very Good" (18/20). Lisbon, Portugal. 1993.

Intensive Course of Introduction to Nuclear and Particles Physics *(Curso Intensivo de Introdução à Física Nuclear e das Partículas)*. Portuguese Physics Society *(Sociedade Portuguesa de Física)* and Faculdade de Ciências / Universidade de Lisboa. Lisbon, Portugal. 1992.

4 Projects

COVID-19 PIRA | `https://gitlab.com/nunoachenriques/covid-19-pira` | Compute a custom ad hoc personal risk and ranking metric of the regions affected by the COVID-19 disease. This is based on the assumption that actives cases are exponentially relevant, reduced by the recovered ones, and increased by lack of detection tests, and all relative to population total. May 2020.

Technology: Debian GNU/Linux; Python (`bs4`, `numpy`, `pandas`, `requests`); Apache HTTP server + uWSGI+ Flask; Docker.

SensAI+Expanse | `https://gitlab.com/nunoachenriques/sensei-expanse` | Towards an artificial empathetic companion to humans. `SensAI` is a sensorial interaction agent as an application for Android-based mobile devices. Enables smartphone sensing in a multimodal approach including in-application diary written texts and social network posts subjected to sentiment analysis. Humans set ground truth emotional valence by means of touch screen buttons. The agent resources are Cloud-expanded (private Cloud; 1-year Google Cloud Platform) by `Expanse` assuring data storage and machine learning towards prediction in context for all individuals. August 2017–September 2020.

Technology: Android (Java, XML); Debian GNU/Linux; Python (`hdbscan`, `matplotlib`, `numpy`, `pandas`, `psycopg2`, `scikit-learn`, `scikit-optimize`, `tensorflow`, `xgboost`); PostgreSQL; Apache HTTP server + Flask.

INTROBOT | A new multipurpose robot with autonomous and human operated navigation and surveillance capabilities. Mixed reality interface and algorithms to trail and track faces live 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.

Patent: (Section 7. "Patents")

TP Service Bus | Tourism of Portugal applications' hub. Critical for the organisation 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 organisation to assure proper interoperability between applications entities and associated contacts. September 2009–March 2011 (Tourism of Portugal), 2014–2015 (IMM).

Technology: 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); Shared documentation and collaboration (Web 2.0); and more.

TP IT Architecture and Engineering | Re-engineering the data centre and applications technology architecture to assure proper governance and energy efficiency with less resource usage footprint. April 2009–March 2011.

Technology: Blades; Virtual servers; Central storage; Fault tolerance; Documentation management; Debian GNU/Linux; Nagios monitoring; and more.

Business Intelligence | Information from data indicators, aggregations, and custom reports development in order to provide self-service analysis for the NOVA Rectory administration. September 2008–July 2009.

Technology: Pentaho; Tomcat; PostgreSQL; Plone/Zope; Java; Python; XML; and more.

MovieCatalog | Film (DVD, DivX...) library catalogue IMDb connected. September 2008.

Technology: Python (SQLite; Threading); IMDb; XHTML+CSS.

Groups | Linking people in groups inside NOVA (authorisations federation). February 2008.

Technology: design and implementation of the database schema (PostgreSQL); development of the user interface using Microsoft Office Access (ODBC) for smooth integration with Windows. Case study: restricted NOVA forum where the authenticated access was developed and integrated using the Radius server infrastructure from the eduroam project.

Erasmus | NOVA Erasmus process on the Web. July 2007–June 2008.

Technology: design and implementation of the database schema (PostgreSQL); development of the user interface using Microsoft Office Access (ODBC) for smooth integration with Microsoft Office Word and Excel on contracts, invoices and reports generation; Web platform integration for the publication of scholarship listings. Case study: management of the NOVA Erasmus data regarding eligible students, agile documents generation such as contracts, invoices with accounting adjustments, and the automated publication of scholarship listings.

Portal da ENSP/NOVA | New technological platform for content, design and layout management. July 2007–May 2008.

NOVA Courses Catalogue (*Guia Informativo da NOVA*) | Extract, transform and load (ETL) of the NOVA organic units information about courses, curricular units and facilities offer in the Bologna's Process scope. March 2007–July 2009.

Technology: non-invasive integration of each school autonomous academic managing systems; XML schema and communication protocol definition; development using Python for Plone integration; *design* implementation using XHTML+CSS.

NOVA Portal incl. NOVA's Bologna site | New technological platform for content, design and layout management. High availability, reliability and performance. Load balance solutions and services priority, and single sign on. Renewal of the Web services, integration with the university information and academic management systems, with a new design and identity. January 2006–July 2009.

FCT/NOVA Portal (see NOVA Portal). June 2005–May 2008.

MovieGene | A multimedia production system using Evolutionary Computation. Master thesis prototype implementation to prove the concept. 2004–2005.

Concepts: Do automatic media composition, or video editing. Described videos with low and high level semantics annotations using MPEG-7. Descriptions are individuals genes, thus, able to be evolved towards a goal defined by any user agent.

Technology: Java 1.5 (JMF, Threads, AWT and Swing). ECJ 12 evolutionary library.

HICOD2000 | Project Engineer and Quality Manager for the "HIgh-performance CODing, protection and trading of satellite images using JPEG2000" project. Partnership with ADETTI in this international project for the European Space Agency (ESA). September 2004–March 2005

Several tasks of quality assurance and system validation which demanded solutions development for formal testing automation implementation.

SCOS2000 | Database Engineer for the design and implementation of the sub-project "MISC-Config Variables". International project for the European Space Agency (ESA). December 2004–January 2005.

Film library | Web design, development, and implementation of a film (DVD, DivX...) library catalogue IMdb connected. 2004.

Technology: Perl to process database data, connect to IMDb, and produce the catalogue using XHTML+CSS.

contact | Web design, development, and implementation of an address book information system (database, logic, and interface) deployed on the Web with pdfLATEX file generation for paper printing. 2004.

Technology: PostgreSQL, PHP, XHTML+CSS, LATEX.

DCR | Web design (co-author), development (author) and implementation of the information system (database, logic, and interface) deployed on the Web with public and private (SSL, session and access levels) user interfaces for the Conservation and Restoration Department of FCT/NOVA. `http://www.dcr.fct.unl.pt/`. 2004.

Concept: information system modelled with concepts mapped to relational tables, about thirty, to solve the specific problem of an academic department with teachers, students, and classes. Including autonomous management for each teacher and discipline record. About ten low-level tables were created to support a content resource management for the documentation available to the public. A news section was also created.

Technology: user interfaces with XHTML+CSS, PHP for the middleware connecting to the PostgreSQL database and generating the webpages with and without forms; SQL (ANSI92/99, PL/pgSQL) standard and consistent.

EO-KES | Information system and Web interface for the knowledge representation, using a developed ontology, over the EO (Earth Observation) satellite (ENVISAT) data from the European Space Agency (ESA). International project with partners from Spain and Italy. September 2003–December 2003.

Project Manager and Research Engineer: Development of an algorithm and the implementation of a functional prototype, using J2SE, connecting it to the Protégé and WordNet API in order to infer the goal of the human agent query in natural language. Prototype demonstrated at the Barcelona meeting with ESA and the project partners.

SPID | Web design, development and maintenance of a search engine, using FCT/NOVA *campus* (`*.fct.unl.pt` and `www.unl.pt`) Web servers as a test environment for one year. 2002.

Lexical search using two metrics. An off-the-shelf free software Web crawler was used. An integration was in place feeding the crawled data into the developed parsing and metrics algorithm, database and warehouse, and Web "smart" interface enabling instantaneous searches (less than one second) among millions of relevant sorted expressions (*n-grams*).

Technology: Java (*multithreaded*), PHP, XHTML+CSS, SQL (ANSI99, PL/pgSQL).

i₉ **PETISCO/MIAU** | Large-scale information system and Web application to serve the FCT/NOVA *campus* of several thousand people between students, teachers, staff, and utilities. Initial ideas and concepts, technology options, people interaction, messages and sharing. The Graduation in Informatics Engineering final thesis was developed over PETISCO/MIAU technology and entitled "Messages" *(Mensagens)*. 1999–2003.

PETISCO: development of a new twofold paradigm both functional and unifying. Prolog-based meta languages for the relational database modelling and queries, application logic, and Web interaction. PETISCO provides a prompt in pseudo-natural language sentences yet with ASCII symbols instead of the usual prepositions. An example, `name / student $ number = 7099` translates to "the name of the student whose number is 7099".

MIAU: the PETISCO-based Faculty information system. The main goals are consistency, coherence, and instantaneous response. Also, to manage authentication and authorisation while interfacing with the user. Several services were deployed for the usual academic life, such as (a) a student self-service for enrolment; (b) students' grades insertion re-engineered process as a self-service for teachers; and (c) management of tuitions, schedules, and more.

FCT/NOVA | Web design (co-author), development (co-author), implementation and management of the FCT/NOVA Web service. `http://www.fct.unl.pt/`. 1999–2003.

Developing and automating more than three hundred webpages. Also, several complementary projects were developed such as (a) a news service; and (b) the Faculty academic services contact and managing forms.

2.º CeNPL | Web design (co-author), development (co-author), implementation and management for the 2nd Logic Programming National Contest *(2.º Concurso encontro Nacional de Programação em Lógica).* 1999.

Search Engine 2 | Adaptation of the indexer (treewalk) and the client (hal) from the "Search Engine 1" connecting the two to a relational database (MySQL) by means of a developed middleware (PHP) in order to perform FCT/NOVA webpages searches. 1999.

Search Engine 1 | Web design, development, implementation and management of a webpages search engine for the Students WWW project (`students.fct.unl.pt`). 1998.

Development of a three-module application: server, indexer, and client. The server is deployed with n concurrent UNIX (Linux) processes based on a shared queue of requests and deliveries.

Technology: C (shared memory, concurrent processes and semaphores), CGI, HTML.

F@CTus | Web design, development, and implementation of the Web archive for the FCT/NOVA Students Newspaper, including the digital scanning and graphical treatment of the existing paper editions (`students.fct.unl.pt/factus`). 1997–1999.

Students | Web design (co-author), development (co-author), implementation and management of the FCT/NOVA students Web service (`students[.si].fct.unl.pt`). 1995–2003.

A pioneer (1995 in Portugal) university students-dedicated website. It included classes links, study material, news, "how to" information, and direct technical support regarding students' personal webpages.

5 Publications

SensAI+Expanse Prediction of Emotional Valence Changes on Humans in Context by an Artificial Agent Towards Empathy. Nuno A. C. Henriques. PhD thesis. Universidade de Lisboa. Lisbon, Portugal. 2020. `https://nunoachenriques.net/sensai+expanse/nachenriques-2020-phd-dissertation.pdf`

SensAI+Expanse Emotional Valence Prediction Studies with Cognition and Memory Integration. Henriques, N. A. C., Coelho, H., & Garcia-Marques, L. (2020). arXiv preprint `https://arxiv.org/abs/2001.09746`. (Accepted as a regular paper in COGNITION 2020)

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www.linkedin.com/in/nunoachenriques | www.researchgate.net/profile/Nuno_Henriques5

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SensAI+Expanse Adaptation on Human Behaviour Towards Emotional Valence Prediction. Henriques, N. A. C., Coelho, H., & Garcia-Marques, L. (2019). arXiv preprint `https://arxiv.org/abs/1912.10084`. (Accepted as a regular paper in ADAPTIVE 2020)

An artificial empathetic entity: the interaction impact on humans. Nuno A. C. Henriques. *Advances in Artificial Intelligence. EPIA 2013*. Angra do Heroísmo, September 9–12. Local Proceedings. CMATI, Universidade dos Açores, Portugal, p. 571–578.

ARES-III: A Versatile Multi-Purpose All-Terrain Robot. Magno Guedes, Pedro Santana, Pedro Deusdado, Ricardo Mendonça, Francisco Marques, Nuno Henriques, André Lourenço, Luís Correia, José Barata and Luis Flores. *ETFA 2012 - IEEE International Conference on Emerging Technology and Factory Automation*, Krakow, Poland, 17–21 September 2012.

Creating Video Art with Evolutionary Algorithms. Teresa Chambel, Luís Correia, Jônatas Manzolli, Gonçalo Dias Miguel, Nuno A. C. Henriques, Nuno Correia. Special issue on *Digital Arts*, Computer & Graphics Journal, v.31, i.6, p. 837–847, Elsevier ISSN: 0097-8493, December 2007.

Creative Video Editing through Evolutionary Algorithms. Teresa Chambel, Gonçalo Dias Miguel, Luís Correia, Nuno A. C. Henriques, Nuno Correia, Jônatas Manzolli. In proceedings of *Artech 2006 — Third International Conference on Digital and Electronic Art*, Pontevedra, Spain, 17–18 November 2006.

MovieGene: Evolutionary Video Production based on Genetic Algorithms and Cinematic Properties. Nuno A. C. Henriques, Nuno Correia, Jônatas Manzolli, Luís Correia, Teresa Chambel. *EvoWorkshops: EvoMUSART — 4th European Workshop on Evolutionary Music and Art*, Budapest, Hungary, 10–12 April 2006, proceedings p. 707–711.

MovieGene: A multimedia production system using Evolutionary Computation. Nuno A. C. Henriques. MSc thesis. Faculdade de Ciências e Tecnologia / Universidade Nova de Lisboa. Lisbon, Portugal. 2005. `https://nunoachenriques.net/moviegene/nachenriques-2005-msc-dissertation.pdf`

6 Communications

EPIA2013 16th Portuguese Conference on Artificial Intelligence. `http://www.epia2013.uac.pt/`. Angra do Heroísmo, Azores, Portugal. 9–12 September 2013.

EuroGP, EvoCOP, EvoWorkshops. Budapest, Hungary, 10–12 April 2006.

1st Seminar of Academic Reflection *(1.º Seminário de Reflexão Académica)*, invited speaker under the theme "New technologies, New Challenges" *("Novas Tecnologias, Novos Desafios")*. FCT/NOVA *campus*, Caparica, Portugal. 2000.

7 Patents

AUTONOMOUS ALL TERRAIN ROBOTICS VEHICLE. Santana, P. F., Flores, L. M. B. M., Flores, N. M. B. M., Guedes, M. E. da S., Deusdado, P. M. M., Henriques, N. A. da C., & Correia, L. M. P. e. (2015). EP2874037A2. European Patent Office. `https://worldwide.espacenet.com/patent/search?q=pn%3DEP2874037A2`

8 Collaborations

Alphappl. Talk (*pro bono*) to the second platoon finalists regarding future perspectives on applications' development, invited by Hugo C. Sousa. Lisbon, Portugal. 5 September 2014.

GFI Portugal. Consultant (*pro bono*), invited by Hugo C. Sousa. Lisbon, Portugal. 17 August 2011.

ULisboa. Talk (*pro bono*) at a post-graduation class (EGT) about Innovation using Web2.0 at Tourism, invited by Hugo C. Sousa. ISEG/ULisboa, Lisbon, Portugal. 27 April 2010.

ULisboa. Talk (*pro bono*) at an MSc class (OGFI) about Information Systems in Tourism. Case study: Turismo de Portugal. Invited by Miguel Mira da Silva. IST/ULisboa, Tagus Park, Oeiras, Portugal. 17 March 2010.

Worten/SONAE. Consultant (*pro bono*), invited by José Vieira de Almeida. Lisbon, Portugal. November and December 2005.

GruVA/LabMAg — Artificial Life Group of the Laboratory of Agent Modelling at the Ciências/ULisboa. Researcher. Lisbon, Portugal. 2005–2008.

IMG/CITI — Interactive Multimedia Group of the Centre of Informatics and Information Technology at the FCT/NOVA. Researcher. Lisbon, Portugal. 2005–2008.

9 Instructor

Web CMS: Plone/Zope. Several ad hoc and also scheduled sessions to equip administration teams with the relevant self-sufficient skills. NOVA Rectory, Lisbon, Portugal. 2006–2008.

Web: HTML+CSS. 24-hour course, 20-student class. ICTIS, FCT/NOVA *campus*, Caparica, Portugal. 1998.

10 Languages

Mother tongue: **Portuguese**.

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	C1	C1	C1	C1	C1
Spanish	B2	B1	B1	B2	A1
French	A2	A2	A1	A1	A1

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

`https://www.coe.int/en/web/common-european-framework-reference-languages/level-descriptions`

11 Honours and awards

PhD support grant by Universidade de Lisboa (BD2015). Lisbon, Portugal. 2016–2019.

6th Prize on the Essay Category at the "IBM Leonardo Da Vinci 95" Contest by IBM (6/200). Lisbon, Portugal. 1995.