

Nahuel Costa Cortez

Phd candidate in Artificial Intelligence

Contact

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Research interests

Prognostics and health management
Decision Making Modeling
Explainable AI
Deep Learning




Core Competencies

Problem formulation
Critical thinking
Organization
Open-mindedness

Computer Skills

Proficient with Python,
Java,
C++,
C,
Matlab,
 \LaTeX

Links

 NahuelCostaCortez
 nahuel-costa-cortez
 mrdKa3EAAAAJhl=es

Languages

English and Spanish

Education

PhD Artificial Intelligence

University of Oviedo **2020-Present**

MA Computer Science

University of Oviedo **2019-2020**

BA Computer Science

University of Oviedo **2015-2019**

Research Experience

Lecturer

Computer Science Department
Languages and computer systems

University of Oviedo **February 2021-Now**

Visiting Researcher

Hawaii National Energy Institute

University of Hawaii at Manoa **2022**

Research and development of Machine Learning tools for the diagnosis and prognosis of lithium-ion batteries

Special Session Organizer

International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems

Milano **2022**

Organized special session on Machine Learning for Partially Labeled Data

Research technician

Metrology and Modeling Lab

University of Oviedo **2019-2021**

Development of computational health models for the treatment of rechargeable batteries

Research intern

Metrology and Modeling Lab

University of Oviedo **2019-2020**

Analysis of intracardiac electrocardiograms for the prediction of cardiovascular diseases

Publications

Journal articles

Data-driven Direct Diagnosis of PV Connected Batteries

Matthieu Dubarry, **Nahuel Costa**, Dax Matthews

Under review at Nature Communications, preprint available on ResearchSquare (2022)

Remaining Useful Life Estimation Using a Recurrent Variational Autoencoder

Nahuel Costa, Luciano Sánchez

Under review at Logic Journal of the IGPL (2022)

Li-ion battery degradation modes diagnosis via Convolutional Neural Networks

Nahuel Costa, Luciano Sánchez, David Anseán, Matthieu Dubarry

Journal of Energy Storage (2022), 55, 105558

RUL-RVE: Interpretable assessment of Remaining Useful Life

Nahuel Costa, Luciano Sánchez

Software Impacts (2022), 10032

Variational encoding approach for interpretable assessment of remaining useful life estimation

Nahuel Costa, Luciano Sánchez

Reliability Engineering System Safety (2022), 222, 108353

Semi-Supervised Recurrent Variational Autoencoder Approach for Visual Diagnosis of Atrial Fibrillation

Nahuel Costa, Luciano Sánchez

IEEE Access (2021), 9, 40227-40239

Graphical Analysis of the Progression of Atrial Arrhythmia Using Recurrent Neural Networks

Nahuel Costa, *Jesús Fernández, Inés Couso, Luciano Sánchez*

International Journal of Computational Intelligence Systems (2020), 13 (1)

Conference and workshop papers

Weakly supervised learning of the motion resistance of a locomotive powered by liquefied natural gas

Luciano Sánchez, Pablo Luque, Daniel Álvarez-Mántaras, José Otero, Nahuel Costa

International Workshop on Soft Computing Models in Industrial and Environmental Applications (SOCO), 2022, Salamanca, Spain

Informed Weak Supervision for Battery Deterioration Level Labeling

Luciano Sánchez, Nahuel Costa, David Anseán

International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU), 2022, Milano, Italy

Explainable condition monitoring from imprecise information

Nahuel Costa, *Luciano Sánchez*

Conference of the Spanish Association of Artificial Intelligence (CAEPIA), 2021, Málaga, Spain

Remaining Useful Life Estimation Using a Recurrent Variational Autoencoder

Nahuel Costa, *Luciano Sánchez*

International Conference on Hybrid Artificial Intelligence Systems (HAIS), 2021, Bilbao, Spain

Graphical analysis of the progression of atrial arrhythmia through an ensemble of Generative Adversarial Network Discriminators

Nahuel Costa, *Jesús Fernández, Inés Couso, Luciano Sánchez*

Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT), 2019, Praga, Czech Republic

Teaching Experience

Lecturer

University of Oviedo **2022-2023**

Introduction to programming, Algorithmics, Business Intelligence

Bachelor's Degree in Computer Engineering in Information Technology

Algorithmics

Bachelor's Degree in Data Science

Operating Systems (EN)

Bachelor's Degree in Software Engineering

Lecturer

University of Oviedo **2021-2022**

Algorithmics

Bachelor's Degree in Data Science

Operating Systems (EN), Databases

Bachelor's Degree in Software Engineering

Introduction to programming, Algorithmics

Bachelor's Degree in Computer Engineering in Information Technology

Lecturer

University of Oviedo **2020-2021**

Operating Systems (EN), Databases, Programming Methodology (EN)

Bachelor's Degree in Software Engineering

Awards

Mobility Fellowship Regional competition (€3,400)	University of Oviedo	2022
Second best thesis project - Doctoral Consortium For the thesis project "Explainable condition monitoring from imprecise information"	Conference of the Spanish Association of Artificial Intelligence	2021
Best master's thesis project For the project "Diagnosis of Atrial Fibrillation by intelligent analysis of intracardiac of recordings"	University of Oviedo	2020
Mentee Chosen as one of the 10 students selected from the University of Oviedo to participate in the professional and academic development programs of excellence promoted by the International Mentoring Foundation for the Advancement of Higher Education (IMFAHE). Mentored by Dr. Francisco Costela, researcher at Schepens Eye Research Institute, Harvard Medical School.	IMFAHE	2019
Master Fellowship Full tuition scholarship (€2,000)	Principado de Asturias	2019
Most innovative Idea For the project "Preprocessing and intelligent treatment of intracardiac electrocardiograms" (€400)	EbIC University Awards	2019
Best undergraduate thesis project For the project "Pre-processing and intelligent treatment of intracardiac electrocardiograms"	University of Oviedo	2019
Santander CRUE CEPYME Scholarship Internship in IT related companies - Bytacora Soluciones Informáticas	Banco Santander	2018
Undergraduate Fellowship Full tuition scholarship (€2,000/yr) and stipend (€3,000/yr) for 4 years	Spanish Government	2015-2019

Reviewing

Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU) Reviewed three conference submissions	2022
IEEE Journal of Biomedical and Health Informatics Reviewed one journal article	2021
International Journal of Approximate Reasoning Reviewed one journal article	2021
The Journal of supercomputing Reviewed one journal article	2021

Courses

Peer Reviewer Course <i>Elsevier</i>	Online	2022
Identify and train your research talents <i>University of Oviedo</i>	Online	2021
Convolutional Neural Networks in Tensorflow <i>DeepLearning.AI</i>	Online	2021

Natural Language Processing in TensorFlow
DeepLearning.AI

Online **2021**

Sequences, Time Series and Prediction
DeepLearning.AI

Online **2021**

Quarter Course in Professional Development
IMFAHE

Online **2020**

How to present a scientific communication
University of Oviedo

Online **2021**

Practical Deep Learning for Coders, v3
FastAI

Online **2019**

Android development from scratch
Udemy

Online **2019**

Certifications



ELSEVIER

Certified Peer Reviewer



DeepLearning.AI

Professional Certificate
TensorFlow Developer



ELSEVIER

Elsevier Reviewer
Certificate



**UNIVERSITY OF
CAMBRIDGE**
Certificate in Advanced
English

Other Experience

Software Developer, Internship
Bytácora Soluciones Informáticas

Gijón, Spain **2018**

Development of a help desk ticketing system - Enterprise Resource Planning (ERP) – Odoo modules – Pycharm – Python – XML

Software Developer, Internship
PSWService

Gijón, Spain **2018**

Web app development – Ionic – AngularJS (HTML5, CSS, Javascript) – PHP