Dennis Hernando NÚÑEZ FERNÁNDEZ

Ph.D. (c) in AI and Neuroimaging. CEA / Inria / Université Paris-Saclay

Paris, France   www.dennishnf.com   dennishnf@gmail.com   +33-749325476   dennishnf   dennishnf

EDUCATION

Ph.D. (c) in AI and Neuroimaging
CEA / Inria / Université Paris-Saclay

📅 2023 Oct – Ongoing   📍 Paris, France

- Improving high-resolution brain MRI using deep learning and reinforcement learning. Advised by Ph.D. Philippe Ciuciu.

M.Sc. in Digital Sciences
Université Paris Cité

📅 2021 Sept – 2023 Jun   📍 Paris, France

- In the top two of the master's class. GPA: 3.7/4.0. Relevant courses: Artificial Intelligence, NLP, Data Science, Robotics.

B.Sc. in Electronic Engineering
Universidad Nacional de Ingeniería

📅 2010 Mar – 2015 Jun   📍 Lima, Peru

- First place in the graduating class. GPA: 3.5/4.0. Relevant courses: Digital Systems, Signal Processing, Control Theory.

EXPERIENCE*

Research Intern
AI Research Lab, Nokia Bell Labs

📅 2023 Mar – 2023 Aug   📍 Paris, France

- Using deep learning and techniques of survival analysis for preventive maintenance. Advised by Alonso Silva, PhD.

Research Intern
LIPN Lab, Université Sorbonne Paris Nord

📅 2022 Mar – 2022 Aug   📍 Paris, France

- Development of an advanced decoding algorithm for extractive question answering. Advised by Nadi Tomeh, PhD.

Research Assistant
Bioinfo Lab, Universidad Peruana Cayetano Heredia

📅 2018 Jun – 2022 Jun   📍 Lima, Peru

- Application of several deep learning techniques to facilitate early medical diagnosis, advised by Mirko Zimic, PhD.

Research Assistant
AGH University of Science and Technology

📅 2016 Oct – 2017 Mar   📍 Krakow, Poland

- Development of a deep learning system, advised by Bogdan Kwolek, PhD. UNESCO Fellowship Program.

ACHIEVEMENTS*

⭐ **Among top two of the master [top 8%]**
EURIP, Université Paris Cité, 2023

⭐ **Phase 1 finalist group [top 15%]**
OpenCV AI Competition, 2021

⭐ **Scholarship winner [top 4%]**
ProUNI - French Embassy, 2021

⭐ **Scholarship winner [top 6%]**
Pi School of Artificial Intelligence, 2020

⭐ **Workshop poster and travel grant**
Int'l Conf on Machine Learning ICML, 2019

⭐ **Scholarship winner**
UNESCO/Poland Scholarship, 2016

⭐ **First in graduating class [top 4%]**
Electronic Engineering, UNI, 2016

⭐ **Top 10 best faculty GPAs [top 2%]**
Electronic Engineering, UNI, 2014

LANGUAGES

Spanish   ●●●●●

English   ●●●●○

French   ●●○○○

ADDITIONAL EDUCATION*

CIFAR Deep Learning + Reinforcement Learning (DLRL) Summer School
CIFAR, Mila, Amii, Vector Institute

📅 2023 Jul   📍 Montreal, Canada

Mediterranean Machine Learning (M2L) Summer School
University of Milano-Bicocca

📅 2022 Sept   📍 Milan, Italy

Specialized MITx MicroMaster in Statistics and Data Science
Massachusetts Institute of Technology (MIT)

📅 2020 Sept – 2022 Mar   📍 Online

PUBLICATIONS*

📄 Journal Articles

- [under review] Núñez, D., Coronel, J., Jimenez-Avalos, G., Chunga, X., Salguedo, M., De la Cruz, L., … Zimic, M. (2022). U-Net and segmentation techniques to analyze microscopic images of MODS cultures captured with a lens-free inverted microscope to facilitate the diagnostics of tuberculosis. *PLOS ONE*.
- Díaz, M. F., Calderón, K., Rojas, A., Vakharia, V. N., Choque, R., Montalvan, A., … COVID-19 Working Group, P. (2022). Intranasal vaccination of hamsters with a Newcastle disease virus vector expressing the S1 subunit protects animals against SARS-CoV-2 disease. *Scientific Reports*.

👥 Conference Proceedings

- Aspilcueta Narvaez, A., Núñez, D., Gamarra Quispe, S., & Lazo Ochoa, D. (2019). Smart campus IoT guidance system for visitors based on Bayesian filters. *Brazilian Technology Symposium BTSym 2019*.
- Núñez, D. (2019a). Development of a hand gesture based control interface using Deep Learning. *International Conference on Information Management and Big Data*.
- Núñez, D. (2018). A real-rime recognition system for user characteristics based on Deep Learning. *2018 IEEE XXV International Conference on Electronics, Electrical Engineering and Computing (INTERCON)*.
- Núñez, D., & Kwolek, B. (2018). Hand posture recognition using convolutional neural network. *22nd Iberoamerican Congress on Pattern Recognition CIARP 2017*.

🖥 Workshop papers

- Zaratiana, U., Khbir, N. E., Núñez, D., Holat, P., Tomeh, N., & Charnois, T. (2022). DyREx: Dynamic Query Representation for Extractive Question Answering. Workshop on Efficient Natural Language and Speech Processing at NeurIPS 2022.
- Núñez, D., Ballan, L., Jiménez-Avalos, G., Coronel, J., Sheen, P., & Zimic, M. (2021). Prediction of Tuberculosis using U-Net and segmentation techniques. AI for Public Health Workshop at ICLR 2021.
- Núñez, D., Ballan, L., Jiménez-Avalos, G., Coronel, J., & Zimic, M. (2020). Automatic semantic segmentation for prediction of tuberculosis using lens-free microscopy images. Machine Learning for Global Health Workshop at ICML 2020.
- Núñez, D. (2019b). Development of a hand pose recognition system on an embedded computer using CNNs. LatinX in AI Research Workshop at NeurIPS 2019.
- Núñez, D., Porras-Barrientos, F., Vittet-Mondoñedo, M., Gilman, R. H., & Zimic, M. (2019). Prediction of gaze direction using convolutional neural networks for autism diagnosis. LatinX in AI Research Workshop at NeurIPS 2019.
- Saldivar-Espinoza, B., Núñez, D., Porras-Barrientos, F., Alva-Mantari, A., Leslie, L. S., & Zimic, M. (2019). Portable system for the prediction of anemia based on the ocular conjunctiva using Artificial Intelligence. LatinX in AI Research Workshop at NeurIPS 2019.

ADDITIONAL EDUCATION*

School of Artificial Intelligence
Pi School of Artificial Intelligence

📅 2020 May – 2020 Jun   📍 Roma, Italy

The Cornell, Maryland, Max Planck Research School (CMMRS)
Cornell University, University of Maryland, Max Planck Institute for Software Systems

📅 2020 Aug   📍 Online

10th Lisbon ML Summer School (LxMLS)
Instituto Superior Técnico (IST)

📅 2020 Jul   📍 Online

ACADEMIC SERVICE*

📄 **Paper reviewer**
IEEE-INTERCON-EIRCON Conferences, NeurIPS-ICML-CVPR-ICLR Workshops, ICLR-NeurIPS-ICML Main Conferences

⊞ **General tasks**
Session chair at UNESCO UCTE (2016), Co-organizer at LXAI Social at ICLR (2021), Chair at LXAI Workshop at ICML (2021), Volunteer at NAACL (2022), ICCV (2023)

INVITED TALKS*

Computer Vision in embedded systems for real-time applications
'Electronic Week 2022', FIEE faculty - UNI

📅 2022 Nov   📍 Online

Machine Learning: an important tool for technological development
'1st International Congress Energy Transition to 2050', FIM faculty - UNI

📅 2022 Jun   📍 Online

Development and Application of Artificial Intelligence in Health
Faculty of Pharmacy and Biochemistry of the Univ. Nacional Mayor de San Marcos (UNMSM)

📅 2019 Nov   📍 Lima, Peru

TECHNICAL SKILLS

PyTorch · Tensorflow · Python · C/C++ · LaTeX · Git · OpenCV · Embedded Platforms · Raspberry Pi · Jetson Nano · FPGA Devices