Rodrigo González Linares

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EDUCATION

MSc Artificial Intelligence
University of Vigo, Spain | 2022 – 2024

MSc Nanobiology
Delft University of Technology & Erasmus University Rotterdam, Netherlands | 2018 – 2020

BSc Biotechnology Engineering – graduated with honors as top graduate
Monterrey Institute of Technology and Higher Education, Mexico | 2015 – 2018

RELEVANT SKILLS

Programming languages: Python, Julia, Wolfram (Mathematica), MATLAB, SQL, Bash, Zsh

Frameworks and libraries: PyTorch, Keras/Tensorflow, Scikit-learn, OpenCV, HuggingFace (Transformers/Diffusers), NumPy, Flux (ML for Julia), River (online ML), Flower (federated ML), Pandas, Matplotlib, PySpark, SentenceTransformers, Faiss, Haystack, PEFT

Software: Git, Pentaho (ETL), Unity, Docker, Hadoop, ImageJ, PyMOL, Geneious, SnapGene, GenomeCompiler, Tableau, GraphPad

Laboratory: CRISPR, TIRF microscopy and smFRET, genetic engineering, molecular biology, microbiology

Languages: English (fully proficient, TOEFL IBT 102/120 in 2017), Spanish (native)

EXPERIENCE

Artificial intelligence research engineer
Gradiant, Spain | Oct 2024 – Present

Machine learning & computer vision intern
CRIDA A.I.E., Spain | Sep 2023 – Feb 2024

- Creation of a virtual vertiport environment in Unity and generation of synthetic data for model training
- Development of a monitoring system capable of incorporating different versions of YOLO for detection/classification/segmentation, k-means and SAM for segmentation, and MiDaS for monocular depth estimation
- Increase of depth estimation precision for flying objects via MiDaS fine-tuning

Researcher
School of Biological Sciences, University of Southampton, UK | Sep 2020 – Sep 2021

- Design and development of a novel nucleic acid amplification method based on rolling circle replication
- *In silico* search and characterization of CRISPR-associated transposons
- Participation in the development of a CRISPR-based diagnostic method for the detection of nucleic acids with a naked-eye readout

Master end project researcher
Kavli Institute of Nanoscience, Delft University of Technology, Netherlands | Sep 2019 – Jul 2020

- Investigation on a CRISPR-associated transposon regarding genome engineering

Research intern
Kavli Institute of Nanoscience, Delft University of Technology, Netherlands | Feb – Jun 2019

- Investigation on the dynamics of Cas13 using single-molecule FRET and TIRF microscopy

PUBLICATION

Spoelstra, W., Jacques, J., **Gonzalez-Linares, R.**, Nobrega, F., Haagsma, A., Dogterom, M., Meijer, D., Idema, T., Brouns, S. and Reese, L., 2021. CRISPR-based DNA and RNA detection with liquid-liquid phase separation. Biophysical Journal, 120(7), pp.1198-1209.