

# Rodrigo González Linares

E-mail address: [r.gonz.lin@gmail.com](mailto:r.gonz.lin@gmail.com) | Professional links: <https://linktr.ee/rodgonzlin> | Citizenship: Spanish (EU)

## EDUCATION

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### 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

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**Programming languages:** Python • Julia • Bash • MATLAB • Wolfram

**AI/ML & Data Frameworks:** PyTorch • TensorFlow/Keras • HuggingFace • Scikit-learn • OpenCV • Pandas • NumPy • Matplotlib

**Tools & Platforms:** Docker • Git • DVC

**Laboratory:** CRISPR • smFRET • TIRF microscopy • Molecular biology • Microbiology

**Languages:** English (fully proficient) • Spanish (native)

## EXPERIENCE

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### Artificial intelligence research engineer

Gradiant, Spain | Oct 2024 – Present

- Develop a multimodal data framework with modular plugins for dataset management, active-learning workflows, local LLM/VLM querying, and xAI integration to accelerate annotation, exploration, and model development.
- Investigated adversarial attacks on deepfake detection models, enhancing transferability through ensemble strategies, expectation-over-transformation, and attention-guided perturbations.

### Machine learning & computer vision intern

CRIDA A.I.E., Spain | Sep 2023 – Feb 2024

- Developed a monitoring system capable of detection and monocular 3D positioning of objects.
- Created a virtual environment in Unity, generating hundreds of synthetic data samples for model training.
- Improved depth estimation MAE for flying objects by 15% through fine-tuning a Vision Transformer (ViT) model.

### Researcher

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

- Analyzed genomic data to identify novel CRISPR systems, applying bioinformatics tools and techniques to extract insights from large datasets.
- Optimized a CRISPR-based diagnostic method for the detection of nucleic acids.
- Designed and developed a novel nucleic acid amplification method.

### Master end project researcher

Kavli Institute of Nanoscience, Delft University of Technology, Netherlands | Sep 2019 – Jul 2020

- Investigated a CRISPR-associated transposon regarding genome engineering.
- Analyzed DNA sequencing data, which provided critical insights that supported the main research hypothesis.

### Research intern

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

- Investigated molecular dynamics using smFRET and TIRF microscopy, generating gigabytes of raw data.
- Processed and analyzed microscopy data using MATLAB.

## PUBLICATION

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Spoelstra, W., Jacques, J., **Gonzalez-Linares, R.**, *et al.*, 2021. CRISPR-based DNA and RNA detection with liquid-liquid phase separation. *Biophysical Journal*, 120(7), pp.1198-1209.