

# Francisco Carrillo-Perez

PHD STUDENT

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## Education

### University of Granada

PHD IN BIOINFORMATICS

Granada, Spain

Oct 2019 - PRESENT

- Working with next-generation sequencing and histology imaging data for cancer classification.
- Integration of multiple sources of information using Deep Learning.

### University of Granada

MSc DATA SCIENCE AND COMPUTER ENGINEERING

Granada, Spain

Oct 2018 - Jul 2019

- **Msc Thesis:** Classification of Ultra-High Energy Cosmic Rays – *Code*

### University of Granada

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Granada, Spain

Sep 2013 - Mar 2018

- **Politecnico di Milano**, Milano, Italy — *Erasmus+ Scholarship 2016-2017*
- **BSc Thesis:** Deep Learning applied to biomedical imaging – *Code*

## Skills

**Languages** Spanish **Proficiency**, English **C1**, Italian **B2**

**Programming Languages** Python, R, C++

**Frameworks** Pytorch, Tensorflow, Scikit-Learn, Pandas, Numpy, Django

## Experience

### University of Granada

PREDOCTORAL RESEARCHER

Granada, Spain

Nov 2019 - PRESENT

- Predoctoral researcher in the CASIP group. Applying Deep Learning to genomic data, making use of different sources of information. Working in the potential use of miRNA as biomarkers.

### mDurance - eHealth Intelligent Solutions

DATA SCIENTIST

Granada, Spain

Sept 2017 - Mar 2019

- Principal developer of a novel section segmentation algorithm over sEMG data.
- Optimization of backend features.

## Projects

### Knowseq R/Bioc Package

CORE DEVELOPER

- Pipeline for a Transcriptomic gene expression analysis including a Machine Learning toolbox.
- Transcriptomic RAW data processing, Biomarkers identification & assessment, DEGs enrichment methodology and Intelligent Automatic Report.

## Publications

### Journal Articles

- Pérez, M. M., Herrera, L. J., **Carrillo, F.**, Pecho, O. E., Dudea, D., Gasparik, C., ... & Della Bona, A. (2019). Whiteness difference thresholds in dentistry. *Dental Materials*, 35(2), 292-297.
- Perez, M. M., Ghinea, R., Herrera, L. J., **Carrillo, F.**, Ionescu, A. M., & Paravina, R. D. (2018). Color difference thresholds for computer-simulated human Gingiva. *Journal of Esthetic and Restorative Dentistry*, 30(2), E24-E30.

## Conference Articles

- Morales, J. C., **Carrillo-Perez, F.**, Castillo-Secilla, D., Rojas, I., & Herrera, L. J. (2020, May). Enhancing Breast Cancer Classification via Information and Multi-model Integration. In International Work-Conference on Bioinformatics and Biomedical Engineering (pp. 750-760). Springer, Cham.
- **Carrillo-Perez, F.**, Herrera, L. J., Carceller, J. M., & Guillén, A. (2019, June). Improving Classification of Ultra-High Energy Cosmic Rays Using Spatial Locality by Means of a Convolutional DNN. In International Work-Conference on Artificial Neural Networks (pp. 222-232). Springer, Cham.
- **Carrillo-Perez, F.**, Diaz-Reyes, I., Damas, M., Banos, O., Soto-Hermoso, V. M., & Molina-Molina, A. (2018). A Novel Automated Algorithm for Computing Lumbar Flexion Test Ratios Enhancing Athletes Objective Assessment of Low Back Pain.

## Book Chapters

- Maldonado, L. J. H., **Pérez, F. C.**, Gómez, M. D. M. P., & Della Bona, A. (2020). Future Developments Using Artificial Intelligence (AI) in Dentistry. In Color and Appearance in Dentistry (pp. 135-142). Springer, Cham.