

Daniel Mateos San Martín

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SUMMARY Freelance Data Scientist and Bioinformatician with strong software development skills, research experience in the natural sciences, solid math foundation, and extensive experience in teaching.

Developed Big Data software in large teams with current methodologies: Continuous Integration and Deployment, Unit Testing, and of course Distributed Version Control. Nursed Big Data software products from inception to production, covering all aspects: data preparation, exploration, modelling, visualization. Fluent in Python and Scala, comfortable in Java and SQL. Written code in several other scripting and compiled languages (R, Julia, C, Clojure). Well versed in Statistics, Linear Algebra and Machine Learning, including Deep Learning for image processing. Handy with visualization tools: Matplotlib, Tableau, Altair, seaborn, bokeh. Knows how to quickly integrate into a team and learn the specifics of the business. Strong communication skills practiced during many years of teaching.

GENERAL EXPERIENCE **Universidad San Pablo CEU, Madrid, Spain** Sep 2018 – Present
Lecturer, Bachelor's Degree in Biomedical Engineering and Master's Degree in Biomedical Engineering

Developed the materials for and taught the Bioinformatics-focused courses in the Biomedical Engineering curriculum, as well as the Numerical Methods and Algorithms and Data Structures courses, at both undergraduate and graduate levels.

K School, Madrid, Spain Feb 2018 – Present
Technical Director, Master in Data Science
Organize and ensure smooth running of the academic aspects of the Master's title in coordination with the Director. That involves evaluation of final projects, assistance to participants, and technical support for participants.

Yogen, Madrid, Spain Jun 2017 – Present
Founder, Data Scientist
Lead projects with institutional and private customers in order to transform vast amounts of data into insight and actionable information.

K School, Madrid, Spain Sep 2015 – Present
Lecturer, Master in Data Science
Teach data exploration and data mining, using the Python scientific stack and Spark for large scale data analysis to prospective Data Scientists. Prepared original class materials and exercises and deliver lectures in more than 15 editions to students that now work in every corner of the sector. Consistently rated above 90% by the participants in the anonymous feedback collected.

CUNEF, Madrid, Spain Sep 2018 – Jun 2019
Lecturer, Master in Data Science
Taught Introduction to programming with Python at the Master's degree in Data Science.

Amadeus IT Group, Madrid, Spain Mar 2014 – Nov 2016
Data Scientist, Travel Intelligence Unit
Applied Big Data techniques (Spark, MapReduce, Scala, Scoobi, SQL on Impala) to analysis of large-scale airline datasets to produce live dashboards and reports, and the Python scientific stack (pandas, scikit-learn, seaborn) for data mining, statistical inference and visualization. Developed a core module of a data product now generating six-figure revenue annually and collaborated in many others.

Centro Nacional de Investigaciones Cardiovasculares, Madrid, Spain Sep 2008 – Oct 2013
Graduate Student researcher, Miguel Torres lab
ChIP-seq analysis of TALE proteins genome-wide binding sites. Used Python scripting and R programming to generate insights into a next-generation sequencing dataset of transcription factor binding in the mouse genome. Also performed experimental confirmation of the resulting conclusions, which were published in international peer-reviewed journals.

CBM Severo Ochoa, Madrid, Spain Sep 2007 – Jun 2008
Laboratory Technician, Javier Díaz Nido lab
Carried out a pilot project to use human olfactory epithelium primary culture as a neurodegenerative disorder model system.

TEACHING

Universidad San Pablo CEU, Madrid, Spain Sep 2018 – Present
Lecturer, Bachelor's Degree in Biomedical Engineering and Master's Degree in Biomedical Engineering

Developed the materials for and teach the Bioinformatics-focused courses in the Biomedical Engineering curriculum, as well as the Numerical Methods and Algorithms and Data Structures courses. Teach at both undergraduate and graduate levels.

- Bioinformatics, Bachelor's Degree in Biomedical Engineering
- Systems Biology, Bachelor's Degree in Biomedical Engineering
- Numerical Methods, Bachelor's Degree in Biomedical Engineering
- Algorithms and Data Structures, Bachelor's Degree in Biomedical Engineering
- Big Data for Biomedicine, Master's Degree in Biomedical Engineering
- Analysis of Genetic Data, Master's Degree in Biomedical Engineering

CUNEF, Madrid, Spain Sep 2018 – Present
Lecturer, Master in Data Science

Taught Introduction to programming with Python at the Master's degree in Data Science.

K School, Madrid, Spain Feb 2018 – Present
Technical Director, Master in Data Science

Organize and ensure smooth running of the academic aspects of the Master's title in coordination with the Director. Responsibilities include:

- Tutoring participants with the development of their end-of-masters projects.
- Evaluating the result of those projects.
- Preparing the teaching tools and environment in advance of the course.
- Providing technical support for participants.
- Keeping the AWS cluster in working order for the Distributed Computing part of the course.

K School, Madrid, Spain Sep 2015 – Present
Lecturer, Master in Data Science

Taught in KSchool's Masters title and the pre-masters Introduction to Programming since their first editions. Taught the following subjects:

- The Python Scientific Stack: pandas, numpy, matplotlib and more.
- Distributed Computing with Spark.
- Machine Learning with Spark.
- Design of Data Products.
- Introduction to Programming for Data Science.
- Introduction to Statistics for Data Science.

BBVA, Madrid, Spain Dec 2017
Instructor, Data Fundamentals course

Developed and taught an in-company training course for the Internal Auditing department of a multinational bank. The topics covered where:

- The Python Scientific Stack: pandas, numpy, and more.
- Data Visualization with Python.
- Supervised and unsupervised Machine Learning.
- Introduction to Machine Learning with the sklearn library.

PUBLICATIONS MARCOS, S., GONZALEZ-LAZARO, M., BECCARI, L., *et al* (2015). "Meis1 coordinates a network of genes implicated in eye development and microphthalmia" *Development* 142.17, pp. 3009–3020

LONGOBARDI, E., PENKOV, D., MATEOS, D., *et al* (2014). "Biochemistry of the tale transcription factors PREP, MEIS, and PBX in vertebrates" *Dev Dyn* 243.1, pp. 59–75

MATEOS SAN MARTIN D., PENKOV, D., FERNANDEZ-DIAZ L., *et al* (2013). "Analysis of the DNA-Binding Profile and Function of TALE Homeoproteins Reveals Their Specialization and Specific Interactions with Hox Genes/Proteins" *Cell Reports* 3.4, pp. 1321-1333

BASS, B. P., TANNER, E., MATEOS SAN MARTIN, D., *et al* (2009). "Cell-autonomous requirement for DNaseII in nonapoptotic cell death." *Cell Death Differ* 16.10, pp. 1362–1371

LANGUAGES Spanish – Native English – Full proficiency French – Elementary German – Elementary

SKILLS	Scala – Python – SQL – Linux – R – Java – Big Data – Latex – Excel – Statistics – Tableau – Machine Learning – Spark – Version Control (git) – Confocal Microscopy – Animal Models – Molecular Biology – Bioinformatics – NGS – Teaching – Research	
EDUCATION	Universidad Autónoma de Madrid , Madrid, Spain PhD, Molecular Biosciences Graduated <i>Cum Laude</i>	Sep 2009 – Oct 2013
	Universidad Autónoma de Madrid , Madrid, Spain MsC, Molecular Biology	Sep 2008 – Sep 2009
	Boston University , Boston, Massachussets Student exchange on a full Scholarship. Full course load plus undergraduate research.	Sep 2006 – Sep 2007
	Universidad Autónoma de Madrid , Madrid, Spain BSc, Biochemistry	Sep 2002 – Sep 2007
ACADEMIC HONORS & AWARDS	Premio extraordinario de la Licenciatura en Bioquímica For extraordinary academic performance.	2007
	Dean's List, Boston University For attaining a cumulative GPA of 4.0.	Sep 2006 – Jun 2007

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