

# Fernando Bellido Pazos

Address: Madrid, Spain | Phone: [+34 638907402](tel:+34638907402) | Email: [fbellidopazos@gmail.com](mailto:fbellidopazos@gmail.com) |  
LinkedIn: [linkedin.com/in/fbellidopazos](https://www.linkedin.com/in/fbellidopazos) | Web: [fbpazos.github.io](https://fbpazos.github.io) | GitHub: [github.com/fbpazos](https://github.com/fbpazos)

## EDUCATION

### Carlos III University of Madrid

MSc in Applied and Computational Mathematics

Madrid, Spain  
Sept. 2022 - June 2023

**GPA:** 8.38/10 with 1 Honourable Mention in Advanced Analysis.

**Relevant Coursework:** Biological Inspired Artificial Intelligence, Modelling and Nonlinear Analysis, Optimization, Stochastic Equations for Finance and Biology, Complex Biological and Socioeconomic systems, Computational Linear Algebra, Computational techniques for Differential equations, Methods for Nonlinear differential equations, Applied discrete mathematics.

### Madrid's Polytechnic University

Bachelor's Degree in Mathematics and Computer Science

Madrid, Spain  
Sept. 2018 - June 2022

**GPA:** 9.4/10 with 14 Honourable mentions.

**Relevant Coursework:** Data Analysis, Software Engineering; Operating Systems, Artificial Intelligence, Databases, Modelling, Programming (Imperative, Object Oriented, Functional, Logic, Systems), IT Project Management, Topology, Calculus, Algebra, Pure Mathematics.

## WORK EXPERIENCE

### Ontology Engineering Group

Data Analyst and Developer Intern

Madrid, Spain  
Sept. 2021 – Jan. 2022

**Description:** Responsible for analysing academic papers stored in institutional repositories and implementing a system to create knowledge graphs and perform queries to address questions regarding Open Science principles.

**Technologies used:** Python, Pandas, SPARQL, RDF, MorphKGC

### Savestars Consulting

Developer

Madrid, Spain  
June 2021 - July 2021

**Description:** Constructed a python-based system to retrieve images from NASA's VNP46A2 satellite, process the images, and apply a mask for a specified area of the peninsula to determine the level of light pollution in that specific region.

**Technologies used:** Python, GDAL, Matplotlib, Numpy

## PROJECTS

### Basic Numerical Methods in Python - Student Oriented

June 2023

**Description:** My end of master's thesis aims to develop an open-source PyPi project that includes a scripted version of the numerical methods taught in universities and a Jupyter-integrated GUI for real-time visualization of those. The goal is to help students understand the methods and promote learning Python instead of MATLAB, which is not as popular or accessible as Python in the current job market.

**Technologies Used:** Python, Jupyter, Numpy, BQPlot, iPyWidgets, Scipy, Pandas.

### Sturm Liouville Problem and Models based on differential equations on the field of Acoustics

June 2022

**Description:** Pursued a comprehensive study of the Sturm-Liouville theory and modeled stringed musical instruments to explore the relationship between mathematics and music. The aim of the research was to answer questions such as: what factors contribute to the distinct sound of instruments like a violin and a piano, and how does mathematics play a role in the creation of music.

**Technologies Used:** Python, Latex, Matplotlib, Plotly, Sympy, NumPy, Jupyter, Differential Equations, Functional Analysis.

## AWARDS

- Cambridge Advanced Certificate (C1)
- Academic Excellence Grant 2021 & 2022
- Academic Excellence Award for Representative Agents of Banco Mediolanum 2022

## ACTIVITIES

### Violinist

Three years of musical performance with a daily practice of 2 hours, enhancing personal skills such as emotional intelligence, patience, commitment, teamwork, and self-motivation. Participation in the European Youth Music Orchestra also included.

- Current repertoire: Salut d'Amour (Edward Elgar), Partita BWV 1004 – Allemande (J.S. Bach), Partita BWV 1006 – Gigue (J.S. Bach), Concerto for 2 Violins BWV 1043 (J.S. Bach)

## ADDITIONAL

**Technical Skills:** Advanced in Python, SQL, Java, Bash, Flask, FastAPI, SQLAlchemy, Numpy, Sympy, Pandas, Matplotlib, Plotly, Bqplot, PyTest, Docker, Git, GitHub Actions, MariaDB, MySQL, SQLite, NoSQL, Jupyter, Office 365, Windows, Linux, Raspberry, Arduino, Heroku

**People Skills:** Leadership, Public Speaking, Critical Thinking, High Self-Motivation, Dependable

**Languages:** English and Spanish