Ignacio Vigil Cardenal

+34 673231760 | ivigilcardenal@gmail.com | linkedin.com/in/ignacio-vigil-cardenal

EDUCATION

University of Warwick   **Warwick, UK**
BSc Mathematics and Statistics Hons (Expected First Class – 1:1) (90%)   *Sep 2024 - July 2027*
- Relevant Modules: Maths by Computer (**Python**), Statistical Laboratory (**R**), Programming for Scientists (**Java**), Probability, Linear Algebra, Calculus, Differential Equations, Abstract Algebra.

International College Spain   **Madrid, Spain**
International Baccalaureate (Bilingual Diploma): Achieved 42/45   *Sep 2022 - July 2024*
- Mathematics AA (7) (Best Grade in Cohort), Physics (7), Economics (7), Geography (6), Spanish A (6), English B (6)

Honours and Awards: Academic Achievement in Physics and Effort and Engagement in Mathematics, Economics, Geography

University of Oxford (Lady Margaret Hall)   **Online**
Course: Artificial Intelligence and Machine Learning: Theory and Practice   *July 2025*
- Intensive course equivalent to a second-year module covering core machine learning and deep learning techniques using Python.
- Learned topics such as supervised learning (linear and logistic regression), neural networks, convolutional neural networks (CNNs) and practical applications such as natural language processing or computer vision, useful to my URSS project and ML practices.

PROFESSIONAL EXPERIENCE

Undergraduate Research Support Scheme (URSS) by University of Warwick   **Warwick, UK**
Researcher in Department of Statistics   *June 2024 –September 2024*
Project: Machine Learning for Brain Tumour Detection
- Conducted a summer research project focused on developing and evaluating machine learning models for detecting brain tumours from medical imaging data
- Pre-processed large dataset of MRI scans applying reduction techniques and feature extraction such as HOG to enhance model performance.
- Implemented state of the art techniques such as convolutional neural networks (CNNs) and Bayesian neural networks (BNNs) using Python and TensorFlow, achieving over 98% accuracy on test set.
- Collaborated with two research supervisors from the department of statistics and contributed in weekly meetings to present findings and discuss model improvements
- Gained experience in machine learning, data science and the process of AI in healthcare.

Bright Future Academy   **Remote**
Mathematics Tutor   *Jan 2022 – Present*
- Tutored over 15 high-school students in advanced mathematics, helping every student significantly improve their grade.
- Designed personalized lessons, breaking down complex concepts such as calculus and linear algebra into accessible, intuitive steps.
- Strengthened communication and adaptability by tailoring explanation to different learning styles and academic backgrounds.

LEADERSHIP & EXTRA-CURRICULAR ACTIVITIES

Warwick Mathematical Finance Magazine   **Warwick, UK**
Contributor   *Sep 2024 - Present*
- Authored an article detailing how Monte Carlo simulations can be applied to pricing financial derivatives by using stochastic processes and statistical modelling

IMC Prosperity 3   **UK**
Participant   *March 2025 – April 2025*
- Ranked 4th among Spanish teams in IMC's Prosperity 3 challenge, developing several Python-based market-making algorithms that captured bid-ask spreads and took directional positions based on live order book data to maximise profit.

SKILLS, INTERESTS & CERTIFICATES

Technical skills: Python (Pandas, NumPy, Matplotlib, Scikit-Learn, Pytorch), R, SQL and Microsoft Office (PowerPoint and Excel)
Languages: English (Fluent), Spanish (Fluent)
Certificates: Harvard's CS50 (C, SQL and Python), Kaggle Intro to Machine Learning, IBM Intro to Computer Vision and Image Processing
Interests: Football, Basketball, Skiing, Scuba Diving