SAMUEL MARTIN FRIAS
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WORK EXPERIENCE

Technical Analyst – *Orchestrade* *September 2021 – Present*
Technologies & Frameworks: C#, Python, Git, gRPC, Front Office
Software engineering responsibilities

- Led the development of Orchestrade's Python API, designed its roadmap and architecture, and automated documentation, testing, and linting with GitHub actions, enabling pythonic access to C# libraries.
- Developed the back end of a web application displaying P&L and Risk metrics using SignalR, gRPC, and Blazor.
- Identified a process gap and spearheaded the development of an automation tool, reducing code patch and deployment time by 60% and minimizing human errors.
- Worked on a real time risk and compliance monitoring tool. Multithreaded service to compute compliance metrics against a portfolio, notifying of any breaches in the limits, and showing live reports of the results to front office.
- Created an internal LLM based chatbot for answering FAQs, increasing support and sales employee satisfaction.

Finance and product management

- Engaged with traders and portfolio managers to gather requirements and develop systems using our internal API. Leveraged customer feedback to enhance API coverage, resulting in a 300% increase in client usage.
- Contributing to creating a customer cost model, gathering, and connecting data already existing in our business and weekly presenting to senior management to help in the selection of market areas with the highest profitability margins.
- Providing our clients with technical support in using our software, assisting in a variety of areas; developing custom risk scenarios, integrating customer's pricers, engaging with prospects on infrastructure scope and sizing.

Mathematical Modelling Researcher – *Imperial College London* *June 2020 – September 2020*
Implementation of my master's Thesis on Bayesian Tools for Automatics System Identification.

- Creating a Python package for the automatic inference of mathematical and statistical models in Python, with a focus on noisy biological data. These were later deployed on the college network using Docker and Django. Github.
- Researching and integrating algorithms from scientific papers in the areas of Computing, Mathematics and Biology. With a focus on Bayesian learning, gaussian processes, and machine learning on time-series data.

Strategy Consultant – *Executive Insight AG, Zurich* *July 2019 – October 2019*

- Summer internship as an associate consultant at a boutique consulting firm in Switzerland specialised in biotech.
- Navigating the complex regulatory landscape of novel gene therapies in Europe to generate market access strategies.
- Collaborated in the creation of project proposals that later sold to clients for a value exceeding £300,000.
- Working in a highly competitive environment and developing the work ethic and stamina required for consulting roles

Undergraduate researcher on computer vision - *Imperial* College London *November 2017 – September 2018*

- Project achieved great response from the community, media coverage by Huffington Post, Evening Standard and more.
- Developing a smart baby buggy capable of guiding visually impaired parents on crowded streets without a cane.
- Managing a team of 10 students on the creation of the first prototype, managing both software and hardware creation.
- Use of machine learning techniques in Python for computer vision (CNNs), creating a model later exported to an app.

PROJECTS

Insty.io – *Self learning project* *July 2023 - Present*

- Creating a web-based portal for streamlining requests for proposals using Retrieval Augmented Generation. An opportunity to learn about LLMs, Vector DBs and tRCP in the backend, and React and NextJS for the frontend.

Cherris - *Self learning project.* *July 2023 - Present*

- Cherris: A high-performance chess engine developed in Rust. Prioritized efficient memory usage through bit manipulation and custom data structures, ensuring rapid and precise game space exploration.

Co-founder & Manager - *Imperial College Algorithmic Trading Society* *December 2017 – August 2020*

- Co-founder of the Algorithmic Trading Society, growing it until becoming one of the biggest financial societies in ICL
- Creator/Organiser of the **Algothon@BlackRock** for two years, the biggest quantitative finance competition in Europe

EDUCATION

Imperial College London, UK - *MEng. Biomedical Engineering* *October 2016 – June 2020*
Awarded best Final Year Project (Master Thesis) out of the cohort of more than 110 people.

- Modelling of biological data
- Control engineering
- Adaptive Signal Processing and Machine Intelligence
- Adaptive signal processing
- Image Processing
- C++ Programming

LANGUAGES & SKILLS

Programming Skills: C#, Python, Rust (Hobby), Typescript (Hobby), Visual Studio, SVN, Git, Scrum, Blazor+WASM, T3 stack, Test Driven Design, Docker, Machine Learning, Data Analysis.
Languages: Spanish (Native), German (Proficient - C1), English (Fluent - C2), French (Intermediate – B1/2)