CIAN HAMILTON

🌐 cianhamilton.eu   ✉ cianhammo@gmail.com

in LinkedIn

Australian citizen eligible for E3 work authorisation (requires only $400 filing fee and 2 weeks processing time)

PROFESSIONAL SUMMARY

Researcher with a Master's in Theoretical Physics and 2 years of business experience, combining expertise in mathematical modeling and statistical analysis with strategic thinking. Experience conducting data analysis using Python and translating complex research into actionable business insights. Proven track record of driving strategic decisions in a fast-scaling startup environment. Seeking to apply analytical and business acumen to a challenging finance role in NYC.

TECHNICAL SKILLS

Data Science: Data analysis, data visualization, statistical modeling, time series analysis

Mathematics: Linear algebra, stochastic calculus, optimization, numerical methods, differential equations

Programming: Python (NumPy, Pandas, Pytorch, MatPlotLib), SQL, Excel, Linux terminal

PROFESSIONAL EXPERIENCE

08/2022 current — **Research Analyst** — **Project Eaden**
- Contributed to multiple areas of the business as the company's first employee, scaling from 1 to over 20 team members.
    - **Research:** Led literature review of 400+ scientific papers, identifying critical research that resulted in the change of our main ingredient, which almost doubled our consumer acceptance scores. Developed and implemented numerical models using partial differential equations to solve heat equation constraints, optimizing product specifications and preventing manufacturing failures.
    - **Intellectual Property:** Delivered on patent strategy including writing and filing a patent, and conducting a Freedom to Operate analysis, which boosted investor interest in our next funding round.

10/2023 12/2023 — **Freelance Researcher** — **Welfare Footprint**
- Co-authored a report, utilizing both quantitative and qualitative research.

09/2017 06/2019 — **Teaching Assistant** — **University of Groningen**
- Tutored students in tutorials and labs, as well as mentoring students. I received the most recommendations of any other tutorial assistant in the department that semester.

EDUCATION

2019 2022 — **Research Master's in Theoretical Physics** — **Free University Berlin**
- Year-long masters thesis in the field of classical and quantum chaos at the Max Plank Society
- Focus on complex systems analysis and mathematical modeling

2016 2019 — **Bachelor's of Science in Theoretical Physics** — **University of Groningen**
- Thesis on Non-Relativistic Supersymmetry
- Emphasis on quantitative analysis and problem-solving

PROFESSIONAL DEVELOPMENT

12/2024 — **Built Automated Stock Analysis Platform: cianhamilton.com**
- Developed python-based system automaitcally analyzing daily S&P 500 stock movements, statistical indicators, and news, to explain significant price movements. The website is an automated pipeline for data collection, natural language processing, and web-based visualization.

2024 — **Self-study with Textbooks (studied cover to cover)**
- Modern Principles of Economics, by T. Cowen and A. Tabarrok.
- Mathematical Statistics with Applications, by D. Wackerly
- Storytelling with Data: A Data Visualization Guide for Business Professionals, by C.N. Knaflic
- Learning SQL by Alan Beaulieu

ADDITIONAL ACHIEVEMENTS AND INTERESTS

03/2022 — **Scientific paper** — **Link to paper**
- Main author of an academic article in the field of quantum chaos. I presented this work at the scientific conference SAMOP21.

07/2022 08/2023 — **Volunteer Research Analyst Work for a Non-Profit** — **SWP**
- Assisted economic modeling (collating relevant academic papers, summarizing, and analyzing data).
- Ran project on building a framework to help prioritize cost-effective interventions.

Other Interests
- Sailing (ex-sailing instructor), ultramarathon running, ultimate frisbee, classic novels, and math puzzles.