ALEXANDER MASCOLO

🌐 https://www.sparsity.ai   📞 +44 74 5333 1777   ✉ alexander.mascolo@gmail.com

CURRENT	*MSc (by Research) Computer Science* **University of Edinburgh**	2024 – 2025 EDINBURGH 🇬🇧

- Fully funded, published research on compilers for data science.
- Open-sourced a query engine with code generation (🎧 sdql).

EXPERIENCE	*Research Engineer* **Tably**	2021 – 2023 LONDON 🇬🇧

- Applied R&D for large-scale distributed stream processing.
- Implemented conflict-free replicated data types (🎧 otto).

Software Engineer · **Gyana** · 2019 – 2020 · LONDON 🇬🇧

- Greenfield development of high-performance analytics libraries.
- Funding by top VC investors, including the founder of Twitter.

Quantitative Developer · **Macquarie Group** · 2017 – 2019 · LONDON 🇬🇧

- Strategist role in Quantitative Investment Strategies (QIS).
- Coded up strategies and improved the backtesting engine.

Quantitative Developer · **Macquarie Group** · 2015 – 2016 · SYDNEY 🇦🇺

- Desk analytics role aligned with Options Market Making.
- Built visualisation tools to monitor trade execution latency.

EDUCATION	*BSc (Hons I) Computer Science* **Australian National University**	2011 – 2015 CANBERRA 🇦🇺

- Interdisciplinary thesis on computer science and economic theory.
- National Merit Scholar (top 0.35%), joint prize with mathematics.
- Teaching assistant for Logic, Formal Methods, Information Theory.

Summer School in Logic and Formal Epistemology · **Carnegie Mellon University** · 2013 · PITTSBURGH 🇺🇸

- Fully funded, attended seminars on statistical machine learning.

PAPERS

Amir Shaikhha, Mathieu Huot, Shideh Hashemian, Amirali Kaboli, Alexander Mascolo, Milos Nikolic, Jaclyn Smith, and Dan Olteanu. A semi-ring dictionary query language for data science. *Journal of Functional Programming*, 2025. forthcoming

CODING

Python ●●●●◑ · Rust ●●●○○ · Scala ●●○○○ · C++ ●○○○○

CITIZENSHIP

🇦🇺 Australian 🇬🇧 British 🇮🇹 Italian (triple) · eligible for 🇺🇸 US E-3 visa (H-1B not required).