

ALEXANDER MASCOLO

🌐 <https://www.sparsity.ai>

☎ +44 74 5333 1777 ✉ alexander.mascolo@gmail.com

CURRENT	<i>MRes Machine Learning Systems</i> University of Edinburgh • Fully funded, research on efficient discrete probabilistic inference. • Open-sourced a compiled query engine for data science (🐙 sdql).	2024 – 2025 EDINBURGH, UK
EXPERIENCE	<i>Research Engineer</i> Tably • Applied R&D for large-scale distributed stream processing. • Implemented conflict-free replicated data types (🐙 otto).	2021 – 2023 LONDON, UK
	<i>Research Engineer</i> Gyana • Greenfield development of high-performance analytics libraries. • Funding by top VC investors, including the co-founder of Twitter.	2019 – 2020 LONDON, UK
	<i>Quantitative Developer</i> Macquarie Group • Strategist role in Quantitative Investment Strategies (QIS). • Coded up strategies and improved the backtesting engine.	2017 – 2019 LONDON, UK
	<i>Quantitative Developer</i> Macquarie Group • Desk analytics role aligned with Options Market Making. • Built visualisation tools to monitor trade execution latency.	2015 – 2016 SYDNEY, AU
EDUCATION	<i>BSc (Hons I) Computer Science</i> Australian National University • <i>Thesis</i> : “Applications of Social Choice and Game Theory to Decision Theory”. • <i>Awards</i> : National Merit Scholarship, Computer Science and Mathematics Prize. • <i>Teaching Assistant</i> : Logic, Formal Methods, Information Theory.	2011 – 2015 CANBERRA, AU
	<i>Summer School in Logic and Formal Epistemology</i> Carnegie Mellon University • Fully funded, seminars on statistical machine learning.	2013 PITTSBURGH, US
PAPERS	Amir Shaikhha, Mathieu Huot, Shideh Hashemian, Amirali Kaboli, Alex Mascolo, Milos Nikolic, Jaclyn Smith, and Dan Olteanu. A semi-ring dictionary query language for data science. <i>Journal of Functional Programming</i> , 2024. forthcoming	
CODING	Python ●●●●● · Rust ●●●○○ · Scala ●●○○○ · C++ ●○○○○	
CITIZENSHIP	🇦🇺 Australian 🇬🇧 British 🇮🇹 Italian (triple) · eligible for 🇺🇸 US E-3 visa (H-1B not required).	