

Sean J. Moran, PhD

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AI/ML Executive | Applied AI Leader | Generative AI, Retrieval & Agents

Public one-page CV. Full CV available on request.

Profile

AI/ML leader with 15+ years' experience across enterprise AI, applied research, information retrieval, computer vision, generative AI, and production machine-learning systems. Former senior AI leader at a global investment bank and currently leading AI initiatives for a global investment and technology group. Specialise in building and scaling AI teams, translating research into production systems, and delivering applied AI in regulated, high-complexity environments. PhD in Artificial Intelligence from the University of Edinburgh.

Selected Experience

Global Investment & Technology Group **London, UK**
Head of AI, UK / Managing Director, AI/ML *2025 – Present*

- Lead the UK AI function covering applied AI, data science, generative AI, enterprise automation, and regulated-domain AI delivery.
- Built and manage a UK-based AI/data science team while remaining hands-on across solution design, prototyping, architecture, and technical delivery.
- Partner with senior stakeholders across financial services, insurance, healthcare, technology, and regulated enterprise domains.
- Lead AI discovery, technical workshops, solution architecture, rapid prototype development, and productionisation planning.
- Delivered initiatives across multi-agent AI, document intelligence, fraud analytics, enterprise knowledge assistants, predictive modelling, and AI-enabled operational automation.
- Focus areas include LLMs, RAG, agentic workflows, knowledge platforms, structured-data extraction, model evaluation, AI governance, and production ML systems.

Global Investment Bank **London, UK**
Executive Director, AI/ML *2020 – 2025*

- Founded and led a 45+ person applied-AI organisation of data scientists, engineers, and product specialists delivering production-grade AI for technology and operations.
- Member of senior technology leadership forums, responsible for technical direction, delivery governance, prioritisation, team development, and investment planning.
- Delivered enterprise AI systems for incident analysis, enterprise search, technology risk, software intelligence, vulnerability triage, infrastructure analytics, and operational automation.
- Led generative-AI and graph-augmented retrieval initiatives used by large internal user populations.
- Recognised for innovation, applied-AI research, patent output, open-source contributions, and production delivery in highly regulated environments.

Global Technology Company **London, UK**
Senior Research Scientist *2018 – 2020*

- Led applied research in computer vision and computational photography, including image enhancement, low-light imaging, denoising, and neural image-processing pipelines.
- Developed deep-learning architectures for image and video enhancement under adverse conditions.
- Published research at major computer-vision venues and filed patents in neural image processing.

Biotechnology / Gene Therapy Company **Edinburgh, UK**
Machine Learning Engineer *2016 – 2018*

- First machine-learning hire, building AI and bioinformatics capabilities for regulatory genomics and precision medicine.
- Developed ML pipelines for modelling DNA regulatory sequences and predicting cell-type-specific gene expression.
- Built end-to-end data-processing, modelling, and visualisation tools for scientific users.

University of Edinburgh & University of Glasgow **Edinburgh / Glasgow, UK**
AI / Information Retrieval Research *2010 – 2016*

- Conducted PhD and post-research work in large-scale information retrieval, learning-to-hash, approximate nearest-neighbour search, probabilistic relevance modelling, and multimodal AI.
- Built systems for image retrieval, image annotation, streaming event detection, multimodal search, and large-scale urban data analytics.
- Published peer-reviewed research and released open-source academic software.

Education

- **PhD in Artificial Intelligence** – University of Edinburgh. Research focus: learning to hash, large-scale image retrieval, representation learning, information retrieval.
- **MSc in Artificial Intelligence, Distinction** – University of Edinburgh. Awarded School of Informatics prize for outstanding achievement.
- **MA in Computer Science & Management Studies** – University of Cambridge.

Technical Focus

- **AI / ML:** Generative AI, LLMs, RAG, AI agents, information retrieval, search, recommender systems, computer vision, NLP, deep learning, classical ML, model evaluation, responsible AI.

- **Engineering:** Python, PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, LangChain, LlamaIndex, MLflow, Databricks, AWS, Azure, OpenCV, Java, JavaScript, SQL.
- **Leadership:** AI strategy, team building, technical governance, executive stakeholder management, applied research, productisation, pre-sales support, regulated-enterprise delivery.

Research, Patents & Open Source

- 30+ peer-reviewed publications and approximately 1,000 academic citations.
- 60+ patent filings across applied AI, NLP, code intelligence, retrieval, federated learning, and enterprise automation.
- Creator and maintainer of open-source AI projects in image enhancement, learning-to-hash, LLM research indexing, and applied AI tooling.
- Public work available via Google Scholar, GitHub, and personal portfolio.

Selected Recognition

- Enterprise innovation awards for applied AI and generative-AI software-engineering systems.
- Best Student Paper, ICMR 2014, for probabilistic relevance modelling for image annotation.
- EPSRC Doctoral Scholarship, PhD in Artificial Intelligence, University of Edinburgh.
- School of Informatics Prize for Outstanding Achievement, University of Edinburgh.
- St Catharine's College Thomas Hobbes Scholarship, University of Cambridge.