Sam Mokhtari

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Professional Summary

With over 15 years of experience in data, AI, and software development, I have a strong track record of advising global clients—including those in financial services, energy, aviation, healthcare, and mining—on building cloud-native, GPU-accelerated data and AI solutions. I've supported 100+ organizations in developing and deploying scalable AI/ML strategies and systems, often serving as a technical leader and trusted advisor.

Holding a PhD in Electrical and Electronics Engineering, I bring deep technical expertise in data analytics, AI, and modern development platforms. My experience spans AI model training/inferencing, embedded systems, and cloud infrastructure, with a focus on innovation and impact. I've also contributed to the broader AI community through published books, blogs, and conference talks, and have consistently evangelized cutting-edge technologies to technical and executive audiences.

Education

Queensland University of Technology
PhD, Electrical Engineering

Professional Experience

Amazon Web Services   **Brisbane, QLD, Australia**
AI Specialist, Accelerated Compute (GPUs, AWS Tranium and Inferentia)   *December 2024 - Present*
- Drove adoption of AWS AI/ML accelerator compute solutions—including Generative AI training and inference workloads—across startups, ISVs, and enterprise developers in ANZ and APAC.
- Developed strategic plans to increase market share in the AI/ML accelerated compute space, with a focus on LLM training, fine-tuning, and deployment on GPU-optimized instances.
- Influenced technical and product leaders through workshops and executive briefings, promoting AWS AI/ML services and compute architectures.
- Partnered with product teams to gather customer insights and shape future product direction for AI/ML workloads.
- Tracked KPIs to assess developer adoption, ecosystem maturity, and accelerated compute penetration across Australia, and New Zealand.

Amazon Web Services   **San Francisco, CA, USA**
Cloud Efficiency Lead Solutions Architect, Data & AI   *June 2023 - December 2024*
- Partnered with strategic customers to design and implement high-performance, cost-efficient AI/ML platforms.
- Championed cloud architecture best practices for compute-intensive AI workloads, enabling scalable inference and training deployments.
- Enabled adoption of services like Amazon SageMaker, Bedrock, and DataZone for developer-centric use cases.
- Authored AWS Well-Architected Generative AI Whitepaper, guiding developers on efficient and scalable GenAI deployment.

Amazon Web Services   **San Francisco, CA, USA**
Cloud Sustainability Lead Solutions Architect, Data & AI   *May 2022 - June 2023*
- Partnered with AWS enterprise customers to deliver scalable, sustainable cloud-based AI solutions aligned with ESG goals.
- Evangelized sustainable AI and data architectures to developers and technical leaders through public speaking, whitepapers, and customer workshops.
- Authored 20+ thought leadership materials exploring the intersection of AI, data analytics, and sustainability.
- Collaborated cross-functionally with AWS solution architects and product teams to guide adoption of optimized compute architectures for AI/ML.
- Enabled sustainability-aligned AI transformations for customers like Deloitte Australia and Syngenta, fostering long-term technical relationships.

Amazon Web Services   **San Francisco, CA, USA**
Senior Manager, Data & AI   *August 2021 - May 2022*
- Led rapid prototyping and deployment of AI/ML solutions that demonstrated real-world value of GPU-accelerated and cloud-native inference models.
- Evangelized AWS analytics and ML services (SageMaker, Glue, Athena) to diverse audiences via public engagements and internal enablement.
- Directed cross-functional teams across engineering, design, and sales to deliver technical prototypes, including IDP (Intelligent Document Processing) and predictive analytics for mining and healthcare domains.

- Implemented GPU-powered solutions that enabled 35% improvement in ML model performance for enterprise clients.
- Architected a modern data platform for automotive telemetry analytics (50TB+), showcasing scalable infrastructure for real-time AI.

Amazon Web Services   **Brisbane QLD, Australia**
Senior Solutions Architect, Data & AI   *June 2020 - August 2021*
- Acted as technical advisor and mentor to developer teams across APAC, enabling adoption of modern data and AI architectures using AWS tools.
- Architected real-time analytics infrastructure for hospitality and construction tech customers, resulting in significant processing efficiency gains.
- Promoted usage of SageMaker and Glue through direct technical enablement, customer hackathons, and developer events.
- Supported over $2M in customer cost savings by aligning architectures with both business and technical AI goals.

Deloitte   **Brisbane QLD, Australia**
Specialist Lead, Data & AI   *September 2019 - June 2020*
- Led AI and analytics transformation programs for clients in energy, banking, and utilities, focusing on scalable, cloud-native AI deployments.
- Built advanced ML and data solutions across AWS, Azure, and GCP, guiding technical teams in adopting best practices for AI at scale.
- Created a fast data community of practice, training 100+ developers on modern streaming and embedded analytics platforms using AWS Kinesis and Azure Data Factory.
- Delivered data maturity assessments and strategic roadmaps, empowering organizations to become AI-ready across verticals.

Deloitte   **Brisbane QLD, Australia**
Manager, Data & AI   *December 2018 - September 2019*
- Managed cross-functional teams delivering ML and data platform solutions for telco, energy, and banking clients.
- Developed embedded AI use cases such as proactive technical support systems, reducing customer support cases by 35%.
- Simplified complex AI/ML architectures into engaging narratives for business and developer stakeholders.
- Designed and deployed real-time data pipeline monitoring and analytics for top-tier financial institutions.

Deloitte   **Brisbane QLD, Australia**
Senior Consultant, Data & AI   *November 2017 - December 2018*
- Developed data lakes, ETL pipelines, and AI solutions across cloud platforms, enabling real-time analytics and insights for logistics and utilities clients.
- Acted as technical liaison between engineering teams and client developers, guiding adoption of scalable ML solutions.
- Optimized data infrastructure for performance and governance, laying the foundation for downstream AI development.

CSIRO   **Brisbane QLD, Australia**
Postdoc Fellow (Machine Learning)   *November 2014 - November 2017*
- Designed and implemented deep learning models—including Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs)—to interpret sensor data from smart home environments.
- Led development of AI solutions enabling elderly and disabled residents to live independently, leveraging real-time IoT data streams.
- Built big data architecture handling 10TB+ of sensor data across 100+ homes, enabling robust data pipelines for model training.
- Collaborated with interdisciplinary teams to deploy models in production-like environments, bridging the gap between research and application.

Avicenna Ltd   **Brisbane QLD, Australia**
Developer   *May 2014 - November 2014*
- Led the design and development of the circuitry for a cutting-edge medical device, ensuring compliance with industry standards and regulations.
- Built real-time visualization of data collected from the medical device, enhancing user engagement and experience.
- Developed Bluetooth-based stethoscope enabling remote patient monitoring and real-time data transmission.

Queensland University of Technology   **Brisbane QLD, Australia**
Researcher- PhD student, Data   *August 2011 - May 2014*
- Conducted applied research on classical machine learning and neural network models to optimize integration of renewable energy into smart grids.
- Developed predictive models using techniques such as decision trees, SVMs, and multi-layer perceptrons (MLPs) to forecast energy generation and load balancing.
- Utilized IoT technology for real-time data acquisition, enabling high-fidelity training data for ML models.
- Published 10+ peer-reviewed papers on smart grid AI, data-driven energy modeling, and system optimization.
- Created hybrid data models combining rule-based systems with neural networks to improve accuracy of renewable energy forecasting by 20%.

Amirkabir University of Technology   **Tehran, Iran**
Researcher, Msc student   *September 2008 - August 2011*

- Researched and developed machine learning models—both classical and neural networks—for anomaly detection in power transformers.
- Applied supervised learning algorithms and feedforward neural networks on time-series data collected via industrial IoT sensors.
- Published 5+ peer-reviewed papers on ML applications in electrical engineering and predictive maintenance.
- Analyzed large datasets to detect patterns indicating equipment failure, laying the groundwork for intelligent monitoring systems.

Skills

- **Technology Stack:** Google Cloud Platform, Power BI, Tableau, SQL, Java, JavaScript, Node.js, Scala, Apache Spark, AWS, BigQuery, Django, Docker, Gradle, Git, HTML/CSS, Python, javascript, Next.js, aws, Microsoft Azure, gcp, spark, Hadoop, Apache Kafka, Apache Hive, Tensorflow, Pytorch, Keras, LangChain, REST APIs, Databricks, Git, Asana, JIRA, Tableau, Crew ai, crew ai, Deep Learning (CNNs, RNNs, MLPs), Generative AI, transfer learning, time-series, CUDA, Adobe After Effects, keras, bedrock
- **Tools:** Power BI, Jupyter Notebook, Google Colab, Asana, Slack, JIRA
- **Core Skills:** Leadership and Strategic Thinking, Data Governance, Generative AI, Agentic AI, AI Strategy Development, AI Frameworks and Models, Strategic Leadership, Public Speaking, evangelism, solution architecture, Thought leadership
- **Functional Skills:** Stakeholder Management, Agile and Scrum Practices, Problem Solving and Innovation, Business Process Optimization, echosystem development, business development

Certifications

- AWS Certified Solutions Architect – Professional
- AWS Certified Solutions Architect – Associate
- AWS Certified DevOps Engineer – Professional
- AWS Certified Developer – Associate
- AWS Certified SysOps Administrator – Associate
- AWS Certified Data Analytics – Specialty
- AWS Certified Machine Learning – Specialty
- AWS Certified Security – Specialty
- AWS Certified Database – Specialty
- AWS Certified Cloud Practitioner

Media & Publications

- Blogs: sammokhtari.com/blogs
- Videos: sammokhtari.com/videos
- Medium Profile: @sammokhtari
- Research Articles: Google Scholar Profile
- Mentoring: Sam Mokhtari