

Anjan Goswami

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Objective: *AI, Search, and Data Executive*

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Executive Summary

Accomplished AI and Engineering Leader with 20+ years of experience building 0-to-1 products across enterprise and consumer platforms. Proven expertise in generative AI, NLP, computer vision, and large-scale search and recommendation systems. Skilled at leading cross-functional teams to deliver innovation at scale, drive measurable business outcomes, and build lasting competitive advantage.

Career Highlights

- **Built and scaled multiple 0-to-1 AI systems across Microsoft, Adobe, Salesforce, Walmart, eBay, and Amazon:** Architected and delivered large-scale search, ranking, recommendation, and multimodal LLM systems used by millions, including Microsoft PowerPoint Copilot, Adobe Acrobat's document-structure intelligence, Adobe Stock's search and ranking models, Salesforce Service Cloud's conversational AI, recommender systems, and Walmart's commerce search engine.
- **Led high-impact AI platforms and data infrastructure:** Designed distributed training and inference systems, multimodal retrieval (semantic and CLIP-based), synthetic and privacy-preserving data pipelines, and comprehensive evaluation frameworks that improved accuracy, efficiency, and safety across enterprise AI products.
- **Delivered measurable business outcomes at global scale:** Drove double-digit improvements in revenue, engagement, and user satisfaction through ML-driven search, recommendation, and personalization; built and mentored high-performing applied science and engineering teams across the US, EU, and Asia.

Areas of Expertise

- **AI, ML, and Information Retrieval:** Developing generative AI systems, large language models (LLMs), NLP, computer vision, recommendation systems, and scalable search architectures.
- **AI Strategy & Execution:** Defining and leading AI roadmaps, translating cutting-edge research into scalable products, and delivering measurable business impact.
- **AI Systems Architecture:** Designing high-performance, cost-efficient platforms for AI, search, and data; architecting parallel and distributed computing systems for large-scale model training and inference.
- **Data Platforms & Data-Centric AI:** Building end-to-end data platforms for human-annotated and synthetic training and evaluation datasets, enabling privacy-preserving data collection and continual model improvement.
- **Leadership, Ethics & Innovation:** Building high-performing AI teams, advancing Responsible AI practices, and aligning applied science with strategic product outcomes.
- **Agentic AI Systems:** Building multi-step LLM-driven workflows, tool-using agents, retrieval-grounded reasoning, and orchestration frameworks for Copilot and productivity AI.
- **Open-Source AI Platform Development:** Created Thinker, a unified LLM access framework featuring a registry-driven router, schema-validated model invocation, and ThinkerQL—a minimal request language supporting OpenAI and local Ollama models with secure credential management, testing, and real-time observability.

Professional Experience

Head of AI and Data, Microsoft PowerPoint

Mar 2024 – Present

- Defined and executed the AI and data strategy for PowerPoint and the broader Office group—developing fine-tuned multi-modal LLMs for slide generation, reference-based design transformation, image slide generation, and structured Office XML creation.

- Architected Copilot systems (e.g., narrative builder) to generate presentations from user input and documents, leading to a 20% increase in engagement. Supported key features including rewrite, translation, speaker notes, and summarization.
- Built and scaled a cross-functional applied science and data organization from 1 to 16 by hiring top AI and data science talents, spanning model development, evaluation, analytics, and data labeling; established foundational programs for synthetic data and quality instrumentation.
- Mentored emerging AI leaders and designed internal training on fine-tuning and evaluation; influenced Office-wide AI hiring strategy and served on Responsible AI and deployment safety committees.
- Partnered with Office LT and Microsoft Research to shape long-term AI investments, foundation model strategy, hiring scientists and other applied science priorities across the productivity suite.

Founder, AI Startup
Sept 2023 – Feb 2024

- Founded and prototyped a GPT-powered healthcare app to improve patient education, with a nonprofit-focused launch planned for 2025.

Director of Machine Learning & Engineering, Adobe
Jul 2019 – May 2023

- Oversaw a 40–60 person cross-functional ML organization delivering AI innovations for Adobe Sign, Acrobat, Stock, Creative Cloud, and the Experience Platform.
- Developed privacy-preserving embeddings, RAG systems for summarization and Q&A, and compact vision models for mobile devices, improving efficiency 3× and supporting 15+ languages.
- Created semantic image search using multi-modal (CLIP) embeddings to enhance recall and diversity.
- Launched an advanced audience discovery platform with segmentation, fast nearest-neighbor search, and scalable clustering—cutting operational costs 4× and improving marketer insights.

Director of Machine Learning & Engineering, Salesforce
Jul 2016 – Jul 2019

- Directed global teams for community and service cloud. Built machine learning orgs.
- Developed recommendation systems, Q&A, spam detection, chatbot conversational AI and drove a 20% engagement lift in Community cloud and launched a series of AI products in Service Cloud.
- Drove data governance and compliance (GDPR/CCPA) for community cloud.

Founder & Managing Consultant, SmartInfer LLC
2015 – 2019

- Advised Etsy on search analytics, ranking, spell correction, and AI org design; improved Neurotrack's Alzheimer's diagnostic accuracy by 20% through better pupil-tracking models (computer vision).

Director of Search Science, Walmart E-commerce
Jun 2014 – Oct 2015

- Led 80+ engineers and scientists and led the transformation to create AI driven commerce search. Built ML-based ranking/recall models, query understanding systems, Markov model-based spell correction, and ML-based type-ahead systems from scratch, vertical search ranking models —boosting revenue by 23% and sales by 17%.

Director, Data Science and Engineering, Elance/UpWork
Jun 2013 – Jun 2014

- Built an end-to-end, near real-time contractor recommender system (hiring rates +4%); established a product analytics team and built an experimentation platform, contributing to M&A due diligence.

Earlier Career: eBay, Amazon A9, Microsoft, Ancestry
2005 – 2013

- Transitioned eBay to the ML-based Cassini search platform (+6% revenue) by architecting Cassini's ranking module and an image-search system for fashion; at Amazon A9, developed global ranking infrastructure and implemented new relevance evaluation systems. Worked on all components of search engine, built ranking models in Microsoft.

Education

- **Ph.D., Computer Science** — University of California, Davis (2018)
- **Executive Education** — University of California, Berkeley (2018)
- **M.S., Computer Science** — The Ohio State University (2005)
- **M.S., Computer Science** — University of South Florida (2002)
- **M.Tech, Mechanical Engineering** — IIT Kanpur (1999)
- **B.E., Mechanical Engineering** — West Bengal (1996)

Selected Patents, Publications & Thought Leadership

- **Patents (10+):** Service Agent Personal Recommender System (US 1020369); Image-based Popularity Prediction (US 20120303615); Query Classification for Improved Search Relevance (US 20120221557).
- **Peer-Reviewed Publications:** IEEE Big Data (2015): *Controlled Experiments for Decision-making in E-commerce Search*; SIGIR ECOM (2018): *Towards Optimization of E-commerce Search and Discovery*; NeurIPS Workshop (2025): *VLM-SlideEval: Evaluating VLMs on Structured Comprehension and Perturbation Sensitivity in PPT*.
- **Recent Paper:** H. Kang, E. Bao, A. Goswami, “*VLM-SlideEval: Evaluating VLMs on Structured Comprehension and Perturbation Sensitivity in PPT*,” arXiv:2510.22045 (NeurIPS 2025 Workshop).
- **Talks & Service:** Reviewer for SIGIR, KDD, EMNLP; invited speaker on 0-to-1 AI system design, data platforms, Responsible AI, team building, and applied machine-learning leadership.
- **Technical & Leadership Writing:** Author of essays and deep-dive analyses on AI systems architecture, product design, organizational design, and model evaluation: smartinfer.substack.com
- **Full Lists:** Publications — smartinfer.com/publication/academic_publications.html
Patents — smartinfer.com/patents

Selected Awards and Recognitions

- Reviewer and panelist (SIGIR, KDD, EMNLP); invited speaker on AI, ML, and search; UC Davis Graduate Fellowship recipient.