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 multi-modal 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, committee member for Responsible AI, Model Security, Safe Deployments, GPU and Training Strategy, OpenAI partnerships 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 $3\times$ 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 $4\times$ 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.