

# Anjan Goswami

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Objective: *AI, Search, and Data Executive*

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## Executive Summary

**AI and Engineering Leader** with 20+ years of experience **leading large-scale teams** (10 to 100+ scientists and engineers) and delivering **0-to-1 AI products** for enterprise and consumer platforms. Combines deep expertise in **generative AI**, NLP, computer vision, and advanced search architectures with **hands-on leadership** to tackle complex technical challenges. Skilled at **redesigning teams** for optimal collaboration and delivering measurable business impact. Experienced in scaling AI-driven systems to achieve growth and create lasting competitive advantages.

## Key Achievements

- **Microsoft PowerPoint Copilot (2024–Present):** Led the ideation and development of an agentic architecture for slide creation using custom large language, vision, and reasoning models. Built the AI and Data team for PowerPoint, driving feature adoption and user satisfaction.
- **Adobe (2019–2023):** Led the development of semantic parsing technology to extract structured data from PDF files for diverse application use cases, as well as a model-distillation framework leveraging neural architecture search to create smaller, robust object detection models for document structure recognition. Improved the diversity of Adobe Stock image searches through a joint text-image embedding model with low-dimensional projections. Directed the creation of an AI-powered audience discovery platform for the Digital Experience Cloud, incorporating sequence embeddings, scalable clustering, dimensionality reduction, and fast nearest neighbor search.
- **Salesforce (2016–2019):** Drove AI for Community and Service Cloud; launched multiple recommender systems, spam/Q&A detection, chatbots, and dialogue recommendation engines—achieving a 20%+ engagement lift and accelerating AI adoption.
- **Walmart (2014–2015):** Led 80+ engineers and scientists, building ground-up ML-based ranking, query understanding, spell correction, auto-suggestion, and recall models; boosted revenue by **23%** and sales by **17%**. Released new search engines for Grocery, Sam’s Club, and ASDA.
- **UpWork (2013-2014):** Led the end-to-end development of a contractor recommender system, achieving a 4% improvement in hiring rates. Developed a platform for controlled experiments and established a product analytics team. Represented UpWork’s Applied Science team in M&A activities.
- **eBay & Amazon (Earlier Career):** Transitioned eBay to ML-based Cassini search (+6% revenue), architecting the ranking layer and image-search pipelines. Built key ranking infrastructure at Amazon A9 for global launches (China, Japan, Germany).

## Areas of Expertise

- **AI, ML, Information Retrieval:** Generative AI, LLMs, NLP, computer vision, recommendation systems, advanced search technologies
- **AI Strategy & Execution:** Creating and leading AI roadmaps, delivering scalable products, and transforming cutting-edge tech into impactful solutions
- **AI Systems Architecture:** Designing cost-efficient, high-performance platforms for AI, search, and data with a focus on integration and operational excellence
- **Leadership, Ethics & Innovation:** Building and scaling high-performing AI teams, championing responsible AI (RAI) practices, and managing cross-functional alignment

## Professional Experience

Head of AI and Data, Microsoft PowerPoint

(March 2024 – Present)

- Developed PowerPoint’s ML strategy and roadmap, establishing infrastructure to fine-tune LLMs for slide generation, presentation quality, and summarization.

- Architected multi-stage, prompt-based AI solutions for Copilot (e.g., narrative builder), introducing innovative features and **reducing negative feedback rates**.
- Built and scaled a cross-functional AI team of scientists and engineers; established a data science function for product analytics and user growth insights.
- **Responsible AI & Committee Engagement:** Actively led the RAI and deployment safety committee to ensure ethical guardrails. Oversaw text-to-audio “podcast from presentation” prototypes and participated in the Office Product hiring committee to shape AI hiring strategy.

#### Founder, AI Startup

(Sept 2023 – Feb 2024)

- Prototyped a GPT-powered healthcare app for personalized patient education; planned a nonprofit launch in 2025

#### Director of Machine Learning & Engineering, Adobe (July 2019 – May 2023)

- **Executive Leadership for Creative-Focused AI:** Oversaw a 40–60 person cross-functional ML organization delivering AI innovations across Adobe Sign, Acrobat, Stock, Creative Cloud, and the Experience Platform. Specialized in generative AI, computer vision, NLP, recommendation systems, and audio/video content suggestions to empower creative professionals at scale.
- **AI-Driven Product Enhancements:** Drove major advances in form-field detection (Adobe Sign), PDF viewing (Acrobat iOS), and multilingual document layout (Adobe Express). Tripled form-detection efficiency and expanded support to over 15 languages.
- **Search & Audio Work:** Provided consultative guidance for the first *audio search* release in Adobe Stock and led a relevant video-based recommender for Creative Cloud Express.
- **Privacy-Centric Data Initiatives:** Designed privacy-preserving feedback loops for ML systems, collaborating with legal teams on global data regulations (GDPR, CCPA). Led data stitching frameworks to create 360° customer profiles with secure data anonymization.
- **LLM Prototypes & Document AI:** Introduced Q&A, summarization, and highlights for Acrobat using retrieval-augmented generation and prompt engineering. Deployed a privacy-centric AI pipeline on Azure, speeding up innovation for internal document intelligence features.
- **Unified Search & Ranking:** Spearheaded an ML-based ranking framework for Adobe Stock and Creative Cloud’s recommendation systems. Built a semantic text-to-image search using multi-modal (CLIP) embeddings, k-sparse autoencoders, and approximate nearest neighbor algorithms—significantly improving recall for images lacking textual descriptions and enhancing diversity in Stock image search.
- **Audience Discovery & Operational Excellence:** Launched an audience discovery platform integrating advanced segmentation, fast nearest-neighbor techniques, and scalable clustering; reduced operational costs fourfold via pipeline simplification and parallelization. Redesigned the UX based on marketer feedback, earning strong praise from pilot customers.

#### Director of Machine Learning & Engineering, Salesforce (July 2016 – July 2019)

- **Executive AI Leadership:** Directed a 40+ person ML organization spanning the US, EU, and Asia, delivering AI-driven features that boosted user engagement for Community Cloud and improved enterprise onboarding for Service Cloud. Oversaw end-to-end processes, including model design, data pipelines, deployment strategies, and cross-functional partnerships.
- **AI-Powered Platform Innovations:** Launched ML capabilities such as recommendation systems, spam detection, Q&A features, and ML-based feed ranking—achieving a **20% increase in user engagement** and driving overall platform growth.
- **Responsible AI & Privacy:** Worked with Salesforce’s ethics committees to ensure compliance with GDPR, CCPA, and internal guidelines for data usage. Led security reviews for community and service data flows.
- **Advanced NLP & Conversational AI Strategy:** Developed BERT-powered chatbots and dialogue recommendation systems for verticals including retail, banking, and hospitality, significantly improving accuracy and adoption.

#### Founder & Managing Consultant, SmartInfer LLC

(2015 – 2019)

- Advised Etsy on search analytics, machine-learned spell correction, and the organizational design of AI teams

- Boosted Neurotrack’s Alzheimer’s diagnostic accuracy by 20% through improved pupil-tracking algorithms

#### **Director of Search Science, Walmart E-commerce** (June 2014 – Oct 2015)

- Led a 16-month AI-driven transformation (80+ staff), launching ML-based ranking, recall models, query understanding, smart promotions, and spell correction
- Achieved **23% revenue growth** and **17% sales uplift**; delivered new search engines for Grocery, Sam’s Club, etc.
- Streamlined recruitment and forged university partnerships, scaling R&D at the Bangalore center

#### **Director, Data Science and Engineering, Elance/UpWork** (June 2013 – June 2014)

- Built a new recommender system from scratch, increasing hiring rates by 4%
- Created a controlled experimentation platform for data-driven improvements, supporting Elance’s transition to UpWork

#### **Early Career (2005 – 2013): eBay, Amazon A9, Microsoft, Ancestry**

- **eBay (2010 – 2013):** Architected eBay’s ML-based ranking, developed ranking models for e-commerce search (+6% revenue), wrote end-to-end image search for fashion and a system to assess product image quality
- **Amazon A9 (2007 – 2010):** Wrote several key ranking & indexing components; expanded search globally (China, Japan, Germany)
- **Microsoft (2006 – 2007):** Wrote components of indexing, ranking, and crawling components in C++; contributed near-duplicate detection and ML-based crawl-interval frameworks
- **MyFamily/Ancestry (2005 – 2006):** Wrote search ranking and indexing components for ancestry data and digitized historical newspapers (OCR error correction, built name extraction models.)

### **Education**

- **Ph.D. in Computer Science**, Univ. of California, Davis (2018) – AI, Distributed Systems
- **Executive Education**, UC Berkeley (2018) – Negotiation and High Performance Leadership
- **M.S. in Computer Science**, Ohio State University (2005) – Distributed Data Mining
- **M.S. in Computer Science**, Univ. of South Florida (2002) – Computer Vision and Graphics
- **M.Tech in Mechanical Engineering**, IIT Kanpur (1999) – Robot Vision & Planning
- **B.E. in Mechanical Engineering**, West Bengal (1996)

### **Selected Patents and Publications**

- **Patents:**
  - Service Agent Personal Recommender System (US 1020369)
  - Image-based Popularity Prediction (US 20120303615)
  - Query Classification for Improved Search Relevance (US 20120221557)
- **Publications:**
  - Doctoral Thesis: *Machine-Learned Ranking Algorithms for E-commerce Search and Recommendation Applications.*
  - IEEE Big Data (2015): *Controlled Experiments for Decision-making in E-commerce Search*
  - SIGIR ECOM (2018): *Towards Optimization of E-Commerce Search and Discovery.*
  - Master’s Thesis (2005): *Efficient Clustering Algorithms for Out of Core, Distributed and Streaming Data*

### **Selected Awards and Recognitions**

- Conference Reviewer: SIGIR, KDD, EMNLP — recognized for contributions to ML research
- Speaker/Panelist at industry conferences (AI, ML, E-commerce)
- Graduate Fellowship at UC Davis for academic excellence