

## Professional Summary

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Senior AI/ML leader with 14+ years of experience building and deploying production AI systems across computer vision, NLP, and multimodal AI. Expert in search systems, generative AI, and content-based retrieval at scale, with proven track record in model development, dataset curation, and team leadership. Deep expertise in machine learning infrastructure, distributed systems, and full-stack development spanning mobile, web, and AI-powered products.

## Professional Experience

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**Aviary** 2024 – Present

*Founder - AI / ML*

- Leading research and development of next generation video search and understanding technologies

**Snap Inc.** 2016 – 2024

*Staff Machine Learning Engineer & Tech Lead Manager*

- Launched Snapchat's first generative AI-powered visual enhancement system and led development of in-house video captioner
- Developed billion+ scale vector similarity search engine powering visual search and ML pipelines
- Led development of emoji-aware OCR service improving spam detection by 168% and reducing moderation costs by \$130k/yr
- Owned ML infrastructure track, defined hiring criteria, grew team from 0 to 10 engineers; reduced costs by \$2M+ annually

**Amazon** 2011 – 2016

*Software Development Engineer II*

- Developed product de-duplication system and led launch of 30+ new product categories

## Education

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**Carnegie Mellon University** 2009 – 2011

*M.S. Computer Science - Language Technologies*

Pittsburgh, PA

**University of Texas at Arlington** 2004 – 2009

*B.S. Software Engineering & Physics*

Arlington, TX

## Technologies & Skills

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- **AI/ML:** Multimodal AI, Computer Vision, NLP, LLMs, Agents, Information Retrieval
- **Infrastructure:** Python, Go, AWS, GCP, Vector DBs, Kubernetes, Ray, LangChain, LlamaIndex
- **Leadership:** Team Management, Technical Strategy, System Design, Technical Hiring & Recruitment

## Select Publications & Talks

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- RAVEN: An Agentic Framework for Multimodal Entity Discovery from Large-Scale Video Collections (Agent4IR @ AAI 2025)
- Multimodal Structured Extraction for Self-Querying Music Video Retrieval (Demo @ ISMIR 2024)
- Multimodality-guided Image Style Transfer using Cross-modal GAN Inversion (WACV 2024)
- FORB: A Flat Object Retrieval Benchmark for Universal Image Embedding (NeurIPS 2023)
- Video matching with a messaging application (US Patent 11,823,456, 2023)
- Open-Vocabulary Object Detection Using Captions (CVPR 2021)
- MLOps at Snapchat: Continuous Machine Learning with Kubeflow & Spinnaker (Kubecon 2020)
- Build accurate training datasets with Amazon SageMaker Ground Truth (AWS re:Invent 2019)