Kevin Dela Rosa

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EXPERIENCE

- **Aviary**   2024
  Head of Machine Learning & AI
    - Researching and building something new in video understanding, stay tuned.

- **Snap, Inc. (Snapchat)**   2016 - 2024
  Staff Machine Learning Engineer, Tech Lead Manager (Multimodal AI, Advanced Understanding, Perception)
    - Launched Snapchat's first generative AI powered visual enhancement system for product advertisements
    - Drove development, data collection / labeling & training / fine-tuning process of Snap's in-house video captioner
    - Drove implementation of camera unlocking experience that enables AR content to be unlocked by scanning arbitrary images; used in thousands of lenses & high profile partner integrations as seen at the Super Bowl & Cannes
    - Launched visual classification via Scan Module in Snapchat's Lens Studio which gives AR creators the ability to recognize 500+ object types across 4 categories (Objects, Places, Cars, Dogs) within a Snapchat lens
    - Drove development of Snap's in-house emoji-aware OCR service used by scan visual search, platform integrity ads, spotlight and content moderation; drove wins across company, e.g. improved spam detection by 168%, reduced human moderation cost by $130k/yr. increased engagement bait detection by 160%
    - Authored billion$^+$ scale vector similarity search engine that powers visual search use cases (e.g. fashion, product, lenses) and content-based machine learning data collection pipelines (e.g. visually or audio similar media & cross-modal retrieval) used to collect candidate training data for 50^+ ML use cases at Snap
    - Owner of machine learning infrastructure track / job family at Snap, defined job requirements and hiring criteria; owned cost goals for org and cut costs by millions of dollars per year; helped define LLM usage polices in engineering

- **Amazon.com, Inc.**   2011 - 2016
- **Space and Naval Warfare Systems Command (SPAWAR)**   2009
- **National Institute of Standards and Technology (NIST)**   2007

EDUCATION

- **Carnegie Mellon University**   2011
  Master of Computer Science in Language Technologies

- **University of Texas at Arlington**   2009
  Bachelor of Science in Software Engineering & Physics (double major)

TECHNOLOGIES

- **AI / Machine Learning**: Multimodal AI, Information Retrieval, Computer Vision, Language Technology, LLMs

- **Infrastructure**: Python, Go, AWS, GCP, Vector DBs, K8s, Ray, LangChain, LlamaIndex, NoSQL, Big Data

SELECT TALKS & PUBLICATIONS

- **Multimodal Structured Extraction for Self-Querying Music Video Retrieval and Playlist Generation**
  K Dela Rosa   Late Breaking Demo @ ISMIR, 2024

- **Structured Entity Extraction from Travel Videos Using Vision-Language Models**
  K Dela Rosa   RecTour @ RecSys, 2024

- **Video Enriched Retrieval Augmented Generation using Aligned Video Captions**
  K Dela Rosa   MRR @ SIGIR, 2024

- **Multimodality-guided Image Style Transfer using Cross-modal GAN Inversion**
  H Wang, P Wu, K Dela Rosa, C Wang, A Shrivastava   WACV, 2024

- **FORB: A Flat Object Retrieval Benchmark for Universal Image Embedding**
  P Wu, S Wang, K Dela Rosa, DH Hu   NeurIPS, 2023

- **Open-Vocabulary Object Detection Using Captions**
  A Zareian, K Dela Rosa, DH Hu, SF Chang   CVPR, 2021

- **MLOps at Snapchat: Continuous Machine Learning with Kubeflow & Spinnaker**
  K Dela Rosa   Kubecon, 2020

- **Build accurate training datasets with Amazon SageMaker Ground Truth**
  V Madan, K Dela Rosa   AWS re:Invent, 2019