Kevin Dela Rosa

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EXPERIENCE

- **Snap, Inc. (Snapchat)** — Seattle, WA
  Machine Learning Tech Lead / Engineering Manager (Multimodal AI @ Advanced Understanding) — *June 2016 - Present*
  - Currently spinning up an applied research team focused on advanced technology for multimodal video understanding
  - Drove implementation of camera unlocking experience that enables AR content to be triggered by scanning images; unlocks thousands of community 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 Snapchat's in-house OCR service used by visual product search, platform integrity, and content moderation services; improved spam detection by 168%, reduced human labeling cost by $128k/yr
  - Drove development of 10B scale reverse image search capabilities for Scan, and deployed supporting infrastructure including focused web crawling and large scale web archiving / data warehousing solutions
  - Drove integration of math problem detector and equation problem solver into Scan and MyAI product surfaces
  - Authored billion$^+$ scale vector similarity search engine that powers visual search use cases (e.g. fashion, product, lenses) and content-based machine learning data collection (e.g. visually or audio similar media retrieval) used to collect candidate training data for 50^+ use cases (e.g. fine grained facial expression detection, body pose for skeletal tracking, cannabis / drug content classification, pet segmentation, audio scene classification, etc.)
  - Trained & deployed multiple vision models powering Scan including scene tagger, sky segmentation, hand detection
  - Managed backend and machine learning engineers; grew team from 0 to 10; promoted multiple engineers; mentored many; owned cost goals for org; cut infra costs by millions of dollars per year; managed relationships with vendors
  - Owner of machine learning infrastructure track / job family at Snap, defined job requirements and hiring criteria
  - Defined technical strategy; named inventor on 14 filed patents; co-authored 3 academic papers, gave 2 industry talks
- **Amazon.com, Inc.** — Seattle, WA
  Software Development Engineer II — *Sept 2011 - June 2016*
  - Developed software for product de-duplication system that continuously improves Amazon.com catalog quality
  - Contributed catalog validation logic & matching criteria; launched over 30 new Amazon.com product categories
- **Carnegie Mellon University** — Pittsburgh, PA
  Graduate Research Assistant — *Jan 2010 - August 2011*
  - Conducted research in natural language processing & educational computing applications; resulted in 8 publications

SELECT TALKS & PUBLICATIONS (3 INDUSTRY TALKS, 14 ACADEMIC PAPERS, 600+ CITATIONS)

- **Multimodality-guided Image Style Transfer using Cross-modal GAN Inversion** — WACV
  H Wang, P Wu, K Dela Rosa, C Wang, A Shrivastava — *2024*
- **FORB: A Flat Object Retrieval Benchmark for Universal Image Embedding** — NeurIPS
  P Wu, S Wang, K Dela Rosa, DH Hu — *2023*
- **Open-Vocabulary Object Detection Using Captions** — CVPR
  A Zareian, K Dela Rosa, DH Hu, SF Chang — *2021*
- **MLOps at Snapchat: Continuous Machine Learning with Kubeflow & Spinnaker** — Kubecon
  K Dela Rosa — *2020*
- **Build accurate training datasets with Amazon SageMaker Ground Truth** — AWS re:Invent
  V Madan, K Dela Rosa — *2019*
- **Topical Clustering of Tweets** — ACM SIGIR Workshop on Social Web & Mining
  K Dela Rosa, R Shah, B Lin, A Gershman, R Frederking — *2011*

EDUCATION

- **Carnegie Mellon University** — Pittsburgh, PA
  Master of Computer Science in Language Technologies — *August 2011*
- **University of Texas at Arlington** — Arlington, TX
  Bachelor of Science in Software Engineering & Physics (double major) — *May 2009*

SKILLS & TECHNOLOGIES

- **Coding**: Python, Java, Go, JavaScript, SQL   **Cloud**: AWS, Google Cloud, Docker, Kubernetes, Spinnaker

- **AI / ML**: TensorFlow, PyTorch, Kubeflow, Ray, LangChain, LLMs   **Data**: Spark, Airflow, Beam, NoSQL, Vector DBs