

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

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

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*