

## EXPERIENCE

- **Snap, Inc. (Snapchat)** Seattle, WA  
*Machine Learning Engineering - Tech Lead / Manager (Perception)* *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 9; 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 2 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 &amp; 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 &amp; PUBLICATIONS (3 INDUSTRY TALKS, 12 ACADEMIC PAPERS, 580+ CITATIONS)

- **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*
- **Adding intelligence to your JS applications** CascadiaJS  
*K Dela Rosa* *2015*
- **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*