

EXPERIENCE

- Snap, Inc. (Snapchat)** Seattle, WA
Staff Machine Learning Engineer, Tech Lead (Multimodal AI, Advanced Understanding, Perception) June 2016 - June 2024
 - 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
 - Trained & deployed computer vision models powering Scan including scene tagger, sky segmentation, hand detection
 - Contributed to backend & iOS/Android apps for context cards, widgets, search, messaging, friending & scan features
 - 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 policies in engineering
- 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
- 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
- Space and Naval Warfare Systems Command (SPAWAR)** San Diego, CA
Naval Research Enterprise Intern May 2009 - Aug 2009
 - Designed experiments & developed text classifiers for use on military chat posts. Results published in ICMLA

SELECT TALKS, PATENTS, & PUBLICATIONS (750+ CITATIONS)

- Video Enriched Retrieval Augmented Generation using Aligned Video Captions** MRR @ SIGIR
K Dela Rosa 2024
- 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
- Video matching with a messaging application / US11823456** US Patent
K Dela Rosa, H Hu, A Huang 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** Social Web & Mining @ SIGIR
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