# Alejandro Pardo

**PhD Candidate in Computer Vision**

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## Professional Experience

**Research Scientist Intern** **San Jose, CA**
*Adobe Research* *Jun 2023 - Sep 2023*

* Worked research on natural language-based video editing, enabling users to edit timelines through simple instructions—helping democratize video editing for non-experts and users with limited accessibility.
* Tackled key challenges in multimodal reasoning, such as aligning natural language instructions with complex visual sequences and scaling large language models to understand and manipulate timeline data structures.
* Developed the "Timeline Assembler," a generative system that outperformed GPT-4o in executing timeline edits across novel datasets we created for evaluation.
* Designed a scalable training framework that uses no human labels by automatically generating rich training data with paired visual edits and instructions—improving the model's usability and generalization.
* Internship led to a first-author workshop paper and a co-authored main conference paper accepted at NeurIPSw 2024.

**Research Scientist Intern** **Munich, Germany**
*Intel Labs* *Aug 2022 - Nov 2022*

* Explored strategies for weakly-supervised segmentation using vision-language models and human-provided referring expressions, with only image-level labels as supervision.
* Designed and tested multiple training setups and architectures to bridge the gap between coarse supervision and dense prediction.
* Gained deep insights into the limitations of vision-language models for segmentation tasks through extensive experimentation with weak supervision techniques.
* Additionally collaborated with another team on a benchmark for test-time adaptation under compute constraints, which contributed to a separate publication at ICML 2024.

## Education

**Ph.D. in Electrical Engineering** **Thuwal, Saudi Arabia**
*KAUST* *2019 - 2025*
Research Focus: Computer Vision for Video Editing Assistance. Developed algorithms to support various stages of the video editing pipeline—such as cutting, stitching, and generating transitions from text prompts—aimed at empowering editors with AI-driven tools.

**M.S. in Biomedical Engineering** **Bogotá, Colombia**
*Universidad de los Andes* *2017 - 2018*
Thesis: Budget-Aware Object Detection. Proposed an active learning method for training object detectors under limited annotation budgets by dynamically selecting both the images and types of labels to annotate during training.

**B.S. in Electronic Engineering** **Bogotá, Colombia**
*Universidad de los Andes* *2010 - 2016*
Thesis: Facial Expression Recognition Using RGB-D Images. Designed a vision system that combines RGB and depth to improve facial expression recognition in low-light or visually ambiguous environments.

## Skills

**Programming and software skills**
*Python, PyTorch, NumPy, OpenCV, Git, Bash, SLURM, Hugging Face, Docker, Jupyter, ffmpeg*

**Machine Learning:**
*Deep Learning, Diffusion Models, Vision-Language Models, Transformers, CNNs, Multimodal Learning*

**Computer Vision:**
*Video Understanding, Video Editing AI, Weak Supervision, Segmentation, Object Detection*

**Generative Models:**
*Text-to-Video, Text-to-Image, Score-based Models, Large Language Models*

**Soft Skills:**
*Scientific Writing, Collaboration, Mentorship, Presentations, Communication*

## Academic Experience

**Attendee** — **Sicily**
*ICVSS Summer School* — *2024*

**Attendee** — **Amsterdam**
*ELLIS Winter School* — *2024*

**Co-organizer and PR Chair** — **Paris**
*CVEU Workshop, ICCV* — *2021*

**Co-organizer and Web Chair** — **Virtual**
*LatinX in AI @ CVPR* — *2021*

## Talks

**Invited Speaker - Biomedical Computer Vision Lab** — **Bogota, Colombia**
*Universidad de los Andes* — *Jan 2025*
Presented work on match-cut generation with computer video diffusion models.

**Invited Speaker - Perceiving Systems Lab** — **Tübingen, Germany**
*Max Planck Institute* — *Sep 2022*
Presented work on video editing with computer vision models.

## Honors and Awards

**Outstanding Reviewer Awards**
*ECCV-2022, CVPR-2020, and BMVC-2020*
Recognized for detailed and constructive reviews by three top-tier computer vision conferences.

**Best Paper Award**
*LatinX in AI @ CVPR-2021*
Awarded for co-authoring the best paper at the LatinX in AI Workshop, recognizing impactful research in the field of AI.

**KAUST Fellowship for PhD Studies**
*2019*
Full PhD scholarship awarded to top international candidates for academic excellence and research potential.

## SELECTED PUBLICATIONS

1. **A. Pardo**, F. Pizzati, T. Zhang, A. Pondaven, P. Torr, J. C. Perez, B. Ghanem. "MatchDiffusion: Training-free Generation of Match-cuts" ICCV, 2025.
2. **A. Pardo**, J. Wang, B. Ghanem, J. Sivic, B. Russell, F. Caba. "Generative Timelines for Instructed Visual Assembly" NeurIPS Workshop on Video-Language Models, 2024.
3. **A. Pardo**, F. Caba, J. L. Alcázar, A. Thabet, B. Ghanem. "Learning to Cut by Watching Movies" ICCV 2021.
4. **A. Pardo**, F. Caba, J. L. Alcázar, A. Thabet, B. Ghanem. "MovieCuts: A Dataset and Benchmark for Cut-Type Recognition" ECCV 2022.
5. M. Ramazanova, **A. Pardo**, B. Ghanem, M. Alfarra. "Test-Time Adaptation for Combating Missing Modalities in Egocentric Videos" ICLR 2025.
6. J. C. Pérez, **A. Pardo**, M. Soldan, H. Itani, J. Leon-Alcazar, B. Ghanem. "Compressed-Language Models for Understanding Compressed File Formats: a JPEG Exploration" Under Review, 2024.
7. M. Soldan, **A. Pardo**, J. L. Alcázar, F. Caba, C. Zhao, S. Giancola, B. Ghanem. "MAD: A Scalable Dataset for Language Grounding in Videos from Movie Audio Descriptions" CVPR 2022.
8. M. Alfarra, H. Itani, **A. Pardo**, M. Ramazanova, J. C. Perez, M. Müller. "Evaluation of Test-Time Adaptation Under Computational Time Constraints" ICML 2024.
9. D. Argaw, M. Soldan, **A. Pardo**, C. Zhao, F. Caba Heilbron, J. S. Chung. "Towards Automated Movie Trailer Generation" CVPR 2024.
10. **A. Pardo**, M. Xu, A. Thabet, P. Arbelaez, B. Ghanem. "BAOD: Budget-Aware Object Detection" CVPRw, 2020.