Sara Rojas

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Career Profile

Ph.D. candidate in Computer Vision at KAUST, under the supervision of Professor Bernard Ghanem. Experience in neural rendering, 3D reconstruction, 3D-based recognition tasks, and diffusion models. Skilled at structuring all stages of research projects, from ideation and experimentation to writing with a proven track record of publications in top-tier conferences. Successful in performing in intense environments and cross-culture collaborations.

Education

2020 - 2024	Ph.D.	Electrical and Computer Engineering — KAUST	(GPA: 4.0/4.0)
2017 - 2018	M.Sc.	Biomedical Engineering — Universidad de los Andes	(GPA: 4.6/5.0)
2013 - 2016	B.E.	Electronics Engineering — Universidad de los Andes	(GPA: 4.07/5.0)

Work Experience

Research Intern — Adobe Inc. May 2023 - Sep 2023
Worked on 3D Scene Editing task using diffusion models (ControlNet) and NeRF representations. Supervised by Kalyan Sunkavalli (Principal Research Scientist).

Research Intern — KAUST Jul 2019 - Dec 2019
Worked on adversarial attacks for point clouds. Paper published at ECCV. Supervised by Professor Bernard Ghanem at the Image and Video Understanding Lab.

Research Intern — University of Southern California Jun 2018 - Aug 2018
Worked with the U.S. Army Research Laboratory, researching automated image segmentation methods to analyze the vulnerability of human organs. Initiated, wrote, and delivered a review on biomedical image segmentation. Supervised by Autumn Kulaga at the Institute for Creative Technologies.

Computer Vision Engineer — Barbara & Frick May 2019 - Jun 2019
Structured the first stage of a project for leveraging state-of-the-art algorithms for detecting, counting, and recognizing grocery items.

Teaching Assistant — Universidad de los Andes Jul 2017 - Jun 2019
Developed supplementary material to course lectures, designed lab activities, provided feedback on course projects, and participated in student evaluations. Courses: Introduction to Electrical and Electronics Engineering, Circuit Fundamentals, IT in Organizations, and Ironman Technology.

Selected Publications

Sara Rojas, Julien Philip, Kai Zhang, Sai Bi, Fujun Luan, Bernard Ghanem, and Kalyan Sunkavalli (2024). "DATENeRF: Depth-Aware Text-based Editing of NeRFs". In: *(**Under submission**)*.

Sara Rojas, Jesus Zarzar, Juan C. Perez, Artsiom Sanakoyeu, Ali Thabet, Albert Pumarola, and Bernard Ghanem (2023). "Re-ReND: Real-time Rendering of NeRFs across Devices". In: *International Conference on Computer Vision (**ICCV**)*.

Jesus Zarzar*, **Sara Rojas***, Silvio Giancola, and Bernard Ghanem (2022). "SegNeRF: 3D Part Segmentation with Neural Radiance Fields". In: *ArXiv:2211.11215*.

Abdullah Hamdi, **Sara Rojas**, Ali Thabet, and Bernard Ghanem (2020). "Advpc: Transferable Adversarial Perturbations on 3d Point Clouds". In: *European Conference on Computer Vision (**ECCV**)*.

Merey Ramazanova, Chen Zhao, Mengmeng Xu, Humam Alwassel, **Sara Rojas**, Fabian Caba, and Bernard Ghanem (2019). "Logistic Regression is Still Alive and Effective: The 3rd YouTube 8M Challenge Solution of the IVUL-KAUST team". In: *International Conference on Computer Vision Workshop (**ICCVw**)*.

Skills and Interests

Software Skills: Python, Tensorflow, PyTorch, MATLAB, and GLSL
Languages: Spanish (Native), English (Professional Working Proficiency)
Interests: Wall and rock climbing, reading non-fiction books, gyming and travelling.

Last updated: April 28, 2024