Jarek Reynolds

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Research Interests

Saliency prediction and visual attention modeling, disability-centered computer vision, salient object detection, hierarchical segmentation, privacy-preserving visual information, dataset design, benchmarking, and evaluation for human-centered perception, participatory annotation.

Education

Ph.D., Computer Science — University of Colorado Boulder 2023 – present
Advisor: Dr. Danna Gurari · Co-Advisor: Dr. Jeffrey R. Hebert · Expected completion: ∼2028
Research: Disability-centered computer vision, saliency prediction, dataset design

M.S., Computer Science — University of Colorado Boulder 2026

B.S., Computer Science — University of Colorado Boulder 2023

M.A., Conflict Resolution — University of Denver 2016

B.S., International Security & Intelligence Studies — Bellevue University 2014

Diploma, Persian Farsi — Defense Language Institute Foreign Language Center 2005

Publications

- **J. Reynolds**, C. K. Nagesh, D. Gurari. "Salient Object Detection for Images Taken by People with Vision Impairments." *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2024. [paper]
- J. Myers-Dean, **J. Reynolds**, B. Price, Y. Fan, D. Gurari. "SPIN: Hierarchical Segmentation with Subpart Granularity in Natural Images." *European Conference on Computer Vision (ECCV)*, 2024. [paper]
- S. Pandey, J. Myers-Dean, **J. Reynolds**, D. Gurari. "Interpreting COVID Lateral Flow Tests' Results with Foundation Models." *IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 2024. [paper]
- N. Prasad, **J. Reynolds**, N. Karsanbhai, T. Sharma, L. Zhang, A. Stangl, et al. "Hierarchical Instance Tracking to Balance Privacy Preservation with Accessible Information." *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2026. [paper]

Research Experience

Graduate Research Assistant — Image and Video Computing Group, CU Boulder 2023 – present
• Research on salient object detection, hierarchical segmentation, privacy-preserving visual information, and visual attention modeling in people with traumatic brain injury (TBI).
• Leading an IRB-approved, Coleman Institute-sponsored user study evaluating AR-based visual noise cancellation prototypes via XR headset with TBI veterans at the Marcus Institute for Brain Health, CU Anschutz.
• Building datasets using participatory annotation methodologies with underrepresented populations.

Industry Experience

Senior Systems Engineer — BAE Systems Jan 2026 – present

Software Engineer & Assembly Technician — SHOTOVER Systems 2020 – 2021

Field Service Engineer — Sierra Nevada Corporation 2012 – 2014

Military Service

Airborne Cryptologic Linguist (1A8X1), Staff Sergeant — United States Air Force 2004 – 2010
• 462 days deployed across six combat rotations (OEF/OIF); 10 Air Medals; Air Force Achievement Medal
• Top Secret/SCI clearance; Honorable Discharge

Grants & Sponsored Research

Coleman Institute for Cognitive Disabilities — Sponsored research on visual noise cancellation technologies for individuals with traumatic brain injury (COMIRB #25-2563), 2025 – 2026.

Teaching

Teaching Assistant, Neural Networks and Deep Learning (CSCI 5922), CU Boulder
Teaching Assistant, Operating Systems (CSCI 3753), CU Boulder

Selected Awards & Honors

USAF ISR Agency Airman of the Year (Level 2)
97th Intelligence Squadron Cryptologic Operator of the Year, 2008
University of Colorado Boulder Dean's List (multiple semesters)
Cum Laude, B.S. Computer Science, University of Colorado Boulder, 2023

Skills & Languages

Languages: English (native), Persian Farsi (professional working), Persian Dari (limited working)
Technical: Python, PyTorch, computer vision, deep learning, annotation pipeline design