

# Stanford

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## Ava Kouhana

Masters Student in Computational and Mathematical Engineering, admitted Autumn 2024

### Bio

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#### BIO

Hi ! I am an ICME master's degree student at Stanford University, currently doing research in Professor Gordon Wetzstein's lab.

Prior to Stanford, I dedicated six months conducting research at Harvard under the supervision of Dr. Mengyu Wang, focusing primarily on Computer Vision tasks like Image Segmentation and Vision-Language Models. Before joining ICME , I have had the opportunity to work for six months supervised by Stanford Professor Craig Levin, researching the application of Diffusion Models for image super-resolution.

My research interests primarily revolve around computer vision, RL, and generative AI, with a growing interest for video generation/ robotics.

#### LINKS

- Google Scholar: <https://scholar.google.com/citations?user=nxEsUB0AAAAJ&hl=fr>
- Personal Website: <https://avakn5.github.io>
- Github: <https://github.com/avakn5>

### Publications

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#### PUBLICATIONS

- **Direct Generation of Attenuation and Scatter Correction of Brain PET Data Using a Conditional Latent Diffusion Model** *IEEE NSS MIC (Nuclear Science Symposium, Medical Imaging Conference)*  
Kouhana, A., Jafaritadi, M., Chinn, G., Levin, C. S.  
2024
- **FairCLIP: Harnessing Fairness in Vision-Language Learning**  
Luo\*, Y., Shi, M., Khan\*, M.  
Conference on Computer Vision and Pattern Recognition.  
2024
- **Super-Resolution Tomographic Image Reconstruction Using Latent Diffusion Models** *IEEE NSS MIC (Nuclear Science Symposium, Medical Imaging Conference) 2024*  
Kouhana, A., Jafaritadi, M., Chinn, G., Levin, C. S.  
2024
- **FairSeg: A Large-Scale Medical Image Segmentation Dataset for Fairness Learning Using Segment Anything Model with Fair Error-Bound Scaling**  
Tian\*, Y., Shi\*, M., Luo\*, Y., Kouhana, A., Elze, T., Wang, M.  
International Conference on Learning Representation.

2023