Yiğit Ekin

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Education

Bilkent University, MsC in Computer Science — Sept 2023 – Sept 2024 (Expected)

- **Coursework:** Deep Generative Models, Computer Vision, Deep Learning, Computer Graphics, Mathematical Programming

Bilkent University, BsC in Computer Science — Sept 2019 – May 2023

- **Coursework:** Machine Learning, Digital Signal Processing, Linear Algebra, Stochastic Processes

Publications

CLIPAway: Harmonizing Focused Embeddings for Removing Objects via Diffusion Models — Jun 2024

Yiğit Ekin, Ahmet Burak Yıldırım, Erdem Eren Çağlar, Aykut Erdem, Erkut Erdem, Aysegul Dundar

Conference on Neural Information Processing Systems 2024
arxiv.org/pdf/2406.09368

MixGAN: Dual Path StyleGAN Fusion for Diverse and Editable Inpainting — Mar 2024

Mustafa Utku Aydoğdu , Ahmet Burak Yıldırım, **Yiğit Ekin**, Aysegul Dundar
In Submission

Projects

Image Colorization GAN — github.com/YigitEkin/Image-Colorizarion-GAN

- Implemented a **U-Net-based generator** and a **Patch-GAN discriminator**.
- Integration of **self-attention modules in generator** to preserve semantic information during colorization.
- **Adaptive instance normalization** on decoder for achiveving reference image based colorization
- Evaluation metrics such as **FID, SSIM, and color histogram KL-Divergence**.

Super resolution GAN — github.com/YigitEkin/sed

- Re-implemented the paper **SeD: Semantic-Aware Discriminator for Image Super-Resolution** using RRDB based generator with Patchwise and pixelwise discriminator.
- **Preprocessed** and combined several **datasets** to obtain more data for training
- Implemented **LPIPS, PSNR, SSIM** evaluation metrics and evaluated the model on the test set

Experience

Graduate Researcher, Bilkent DLR LAB — Sept 2023 – Today

- Actively conducting research on generative models with main emphasis on diffusion models
- Supervise undergraduate students on their Senior Reseach Project course.

Machine Learning Intern, Novit.AI — June 2022 – Aug 2022

- **Fine-tuned YOLOv5** model on a specific dataset that localizes humans with bounding boxes
- Implemented a **Camera module for Raspberry PI** that detects human using fine-tuned YOLOv5 model. (Github Link)