Akkapaka Saikiran

saikiraniitb@gmail.com | akkapakasaikiran.github.io | linkedin.com/in/a-saikiran

Education

ETH Zürich, Switzerland — *2022 - present*
MSc in Computer Science, *focus:* Visual Computing and Machine Learning — *GPA: 5.44 / 6.00*

Indian Institute of Technology Bombay, India — *2018 - 2022*
B.Tech. with *Honours* in Computer Science and Engineering — *GPA: 9.15 / 10.00*

Experience

Disney Research Studios — *Sep '24 - present*
Master's Thesis Student, jointly with Computer Graphics Lab, ETH — *Zürich, Switzerland*
- **Rendering using generative models**: simplifying the rendering process by leveraging diffusion models
- Built a custom dataset using **Blender**'s Spring movie, rendering scenes at multiple noise levels (spp)
- Fine-tuning **Stable Diffusion** to synthesize final quality renders from **buffers (AOVs) and sparse keyframes**

Egonym AG — *Oct '23 - Jun '24*
Student Research Engineer — *Zürich, Switzerland*
- Developed a pipeline for **photorealistic face anonymization** using generative AI to protect visual privacy
- Used Stable Diffusion with **DDIM inversion** and **IP-Adapters** for controllable face editing
- **Preserved attributes** like age, gender, and ethnicity while generating realistic and artifact-free faces

Abacus.ai — *Jun '22 - Jul '22*
Research Intern — *Mumbai, India*
- Led a comprehensive literature review on **explainability** in **recommendation systems**
- Contributed to the design of a unified recommender system framework to analyze explainability

Microsoft India R&D — *May '21 - Jul '21*
Data Science Intern — *Bangalore, India*
- Worked on improving Microsoft's Bing Ads classification module using **vision-language** models
- Used **object detection** tags as anchor points in addition to word embeddings to make a joint prediction
- Designed a multimodal pipeline that resulted in performance competitive with in-house baselines

Projects

Self-supervised Learning of Multimodal Representations — *Jul '21 - Dec '21*
Bachelor's Thesis with Prof. Preethi Jyothi and Prof. Ganesh Ramakrishnan, IITB
- Explored self-supervised pretraining strategies to learn joint **audio-video-text representations**
- Developed a synthetic dataset and evaluated the learned representations on cross-modal **retrieval** tasks

Sketch-based Modeling — *Jan '21 - Apr '21*
Research Project with Prof. Parag Chaudhuri, IITB
- Surveyed various approaches of generating **3D parametric models** given user-drawn 2D or 3D sketches
- Worked on devising a novel system to generate smoothly-connected **Bézier patches** that fit a set of sketches

FMX Modeling and Animation | [Movie] — *Aug '20 - Nov '20*
Course Project in Computer Graphics
- Modeled a bike, a rider, and a track in **OpenGL** and rendered it using texture mapping and basic shading models
- Animated the above scene with environment lighting to create a **short movie** of an FMX rider performing stunts

Analysis of Vector Addition Systems — *Apr '20 - Jun '20*
Research Internship with Prof. Alain Finkel, ENS Paris-Saclay
- Studied vector addition systems, a formal framework to describe distributed systems
- Wrote proofs and worked on devising algorithms for problems on reachability sets of VASs

Responsibilities

Teaching Assistant
- ETH Zurich: Computer Graphics — *Sep '24 - Jan '25*
- IIT Bombay: Calculus, Logic for CS, Operating Systems — *2020 - 2022*

Winter in Data Science Mentor | *Analytics Club, IITB*
- Mentored students on a project about visualizing neural networks (saliency maps, GradCAM) — *Dec '21*

Technical Skills

Languages	Python, C/C++, MATLAB, LaTeX, HTML/CSS, Javascript, Java, SQL
Tools & Libraries	PyTorch, TensorFlow, Git, GDB, Ghidra, Wireshark, OpenGL, Spark, NodeJS