Srinath Ravi

+91 9448539814 | srinathr874@gmail.com | rsrinath14.github.io | github.com/rsrinath14 | linkedin.com/in/r-srinath14

Experience

UnscriptAI, *AI Research Scientist* *Oct 2024 - Present*

- Working on Talking Head Synthesis using 3D computer vision techniques.

DataLabs-Capital One, *Consultant* *May 2024 - Oct 2024*

- Built an end-to-end immersive experience pipe line for Capital One's vehicle reselling vertical in collaboration with IISc.
- Suggested methods for detecting inconsistencies in **COLMAP** pose estimates using extrinsic information from the camera poses. This approach helped flag inconsistencies early, saving compute power.
- Built **3DGS** and **NeRFs** on a wide range of videos which were captured in the wild under different lighting conditions and with different mobile phone cameras.

Vision and AI Lab – Indian Institute of Science, *Research Assistant* (**Prof. Venkatesh Babu**) *Aug 2022 - Present*

- Designed and developed an Implicit NeRF model called **Strata-NeRF** that uses VQ-VAE for handling Stratified Scenes, beating state of the art methods like MipNeRF-360, TensoRF and InstantNGP.
- Contributed to the creation of **ChromaDistill**, a Radiance Field Network capable of colorizing grayscale and infrared images with 3D consistency.
- Enhanced 3D Gaussian Splatting (3DGS) performance by developing **Turbo-GS**, which accelerates training, improves densification through error guidance, and incorporates convergence-aware budget control, while maintaining high-quality rendering.

Springworks, *Machine Learning Engineer* *Aug 2021 - July 2022*

- Leveraged **PDFMiner** along with **Google Vision API** to parse and extract information from documents such as Pan Cards, Driving License, AADHAR card, ID cards etc. This reduced costs by **30%**.
- Developed and Maintained Algorithmic trading bots that traded wide range of crypto currencies for 24 x 7 in **Binance exchange** using python. Used **Appsmith** to display Analytics of the trading bot.
- Designed error codes and integrated error handling mechanism with Slack, thereby reducing 24 hours/month debugging time.

ResoluteAI.in, *Machine Learning Engineer Intern* *Mar 2021 - June 2021*

- Built an Object Detection model (**Tiny Yolo V4**) that performed Towel Counting and Fabric Defect Detection. The project is currently being used in one of India's fastest growing textile companies which supplies around the globe.
- Used **EasyOCR** to count and identify different labels on packages moving on a conveyor belt.
- Created a dashboard with **PyQT** and **OpenCV** to perform Road Traffic analytics by calculating In-flow, Out-flow and Peak hour.

Education

9.29/10 BE in Computer Science, *Dayananda Sagar College of Engineering* | Bengaluru, India *2018-22*

Achievements: Awarded Intern of the Month at Springworks. | Reached Final Round @DSCE Ideathon 2019| Top 25 @Hack the Mountains 2.0 out of 400+ teams
Courses: Data Structures with Applications | Computer Organization | Database Management | Computer Architecture | Operating System | Software Engineering | Computer Networks | Machine Learning
Reviewer: ACM Multimedia 2023 | ACML 2023 | AI-ML Systems 2023 | WACV 24, 25 | CVPR 2024 | ECCV 2024 | ICLR 2025

Skills

Language	Python, C/C++, Java, Dart
Tools/Library	Pytorch, Keras, Jax, Tensorflow, Docker, OpenCV, Blender, Flutter, Falcon
Certifications	Deep Learning Specialization, Courcera – (2020) | Introduction to Abstract and Linear Algebra, NPTEL – (2018)

Publications

Turbo-GS: Accelerating 3D Gaussian Fitting for High-Quality Radiance Fields *Under Review*
Tao Lu*, Ankit Dhiman*, **Srinath R***, Emre Arslan, Angela Xing, Yuanbo Xiangli, R Venkatesh Babu, Srinath Sridhar

Acc3DSeg: Accelerated 3D Segmentation via Contrastive Learning *Under Review*
Ankit Dhiman*, **Srinath R***, Jaswanth Reddy, R Venkatesh Babu

ChromaDistill: Colorizing Monochrome Radiance Fields with Knowledge Distillation *WACV 2025, AI3DCC ICCV 2023*
Ankit Dhiman, **Srinath R**, Srinjay Sarkar, Lokesh R Boregowda, R Venkatesh Babu

Strata-NeRF: Neural Radiance Fields for Stratified Scenes *ICCV 2023*
Ankit Dhiman, **Srinath R**, Harsh Rangwani, Rishubh Parihar, Lokesh R Boregowda, Srinath Sridhar, R Venkatesh Babu

Projects

Finegrained Inpainting with Stable-Artist [Code]

- Implemented an in-painting pipeline that makes use of **Stable Artist** (a diffusion model) in order to in-paint images with different composition and styles.
- Provided users with the option to input multiple text prompts of varying strengths along with the masked image to achieve the desired fine-grained in-painted results.

Object Manipulation in Zip-NeRF (OM-NeRF)

- Developed **OM-NeRF**, a four-step method for comprehensive 3D scene decomposition and manipulation.
- Leveraged a pre-trained segmentation model to distill semantic information, enabling the prediction of semantic masks.
- Decomposed objects and backgrounds within 3D scenes using semantic information, and performed foreground object manipulations (translation, rotation, and duplication).