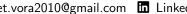
Jeet Vora

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Research Interests

Computer Vision, Deep Learning for Multi-camera systems, Generalization, Creative AI

Education

Master's By Research in Computer Science IIIT Hyderabad

(Specialization in Artificial Intelligence and Robotics)

Bachelor of Engineering in Computer Science University of Mumbai

Diploma in Computer Science *Shri.Baghubhai Mafatlal Polytechnic*

CGPA: 8.2/10.0 2019-2023

CGPA: **8.96/10.0** *2015-2018* CGPA: 8.2/10.0 2012-2015

Publications

1. **Jeet Vora**, Dutta, S., Jain, K., Karthik, S. & Gandhi, V. Bringing Generalization to Deep Multi-View Pedestrian Detection in Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) Workshops Paper Link (Jan. 2023), 110-119.

Research and Work Experience

Research Engineer Animaker India Pvt. Ltd.

July, 2022 - Present

- Conducting Al-ML (CV/NLP) research to enhance various Animaker products, including Animaker, Steve.ai, Picmaker, and Vmaker.
- Leading research and development of Al-ML solutions, ensuring seamless integration, CI/CD, and scalable deployment within Animaker's ecosystem.
- Collaborating with Product Development, DevOps, Marketing, and Sales teams to drive the success of Al-enabled features and services.
- Key projects and features:
 - Picmaker AI Image and video matting, template search optimization.
 - Vmaker AI Transforming raw footage into polished videos.
 - **Steve.ai** Automating script-to-animation/live video and text-to-GenAl video creation.
 - Animaker AI Al-powered moment search and the next-gen Animaker AI 2.0.
 - Talking Head AI Advanced lip-sync for animated characters.

Research Student /// Hyderabad

Jan, 2020 - May, 2023

- Advisor: Dr. Vineet Gandhi; Thesis: Towards Generalization in Deep Multi-View Pedestrian Detection and Tracking.
- Specialized in multiple object detection and tracking across multiple views.
- Proposed and evaluated a model incorporating generalization for multi-camera detection across varying camera setups and new
- Achieved a 20% improvement in MODA and MODP metrics over benchmarks.
- Created synthetic datasets for multi-camera detection using GTA-V and Unity game engines.
- Developed post-processing tools for joint calibration and synchronization of multiple cameras.
- Demonstrated strong generalization from synthetic to real-world scenarios (Sim2Real).

Research Student Star Sports

Jan, 2020 - May, 2023

- Project Supervisor: Dr. Vineet Gandhi; Blog: IIITH's Player Tracking Tech Drives Asia Cup's Narrative For Viewers.
- Developed **Real-Time Player Tracking** at 30fps with 4K/FullHD live streaming.
- Formulated player merging from multiple cameras in bird's eye view as a linear assignment problem.
- Worked on camera calibration and homography for cricket grounds to enable multi-camera player tracking, bird's-eye view transformations, and real-world trajectory analysis.
- Set up infrastructure using Blackmagic Design products for 4K live streaming and processing.
- Deployed and broadcasted technology for live matches at:
 - Asia Cup 2022 (UAE, Dubai)
 - Asia Cup 2023 (Sri Lanka)
 - Tamil Nadu Premier League (TNPL)

Research Collaboration *Apple*

Jan, 2022 - Mar, 2022

- Project Supervisor: Dr. Vineet Gandhi.
- Developed a proof of concept (PoC) for Video Classification and Action Recognition to analyze assembly operations in an industrial production line.

Software Engineer Vistaar Technologies, Inc.

Jun, 2018 - Aug, 2019

- Worked as part of the Reimbursement Solution Team, analyzing and providing technical solutions.
- Directly involved in development, delivery and onboarding of Vistaar's Saas based Reimbursement product for clients.
- Designed and implemented tailored solutions for Diageo, E. & J. Gallo Winery, and Brown-Forman, improving and streamlining processes, maximizing recovery, and enhancing customer success.

Teaching and Mentorship

AI-ML Mentor InLustro Learning

July, 2024 - Present

- Providing industry-relevant Al-ML training and mentorship to students, professionals, and faculty members through lecture sessions and hands-on workshops.
- Mentored 14 Al-ML projects, guiding teams in model development, optimization, and deployment.
- Collaborated with clients, including L&T Madh Training Academy and MLR Institute of Technology, to deliver tailored AI-ML solutions.

Teaching Assistant IIIT Hyderabad

Jan, 2022 - May, 2022

- Lecturer: Dr. Vineet Gandhi, Course: Statistical Methods in AI (SMAI), Spring 2022.
- Prepared assignments, conducted lab sessions/tutorials, and guided students through projects.

Al-ML Mentor TalentSprint

Oct, 2021 - Oct, 2022

- Supervisor: Dr. Anoop Namboodiri.
- Mentored Al-ML projects as part of the Al/ML program by IIIT Hyderabad and TalentSprint.
- Provided guidance on AI-ML projects and conducted lab sessions.
- Supervised 4 teams working on Image Tagging and Road Object Detection.

Technical Skills

Languages: Python, C, C++, SQL

Deep Learning: PyTorch

Model Optimization: ONNX, TensorRT, AWS Inferentia Vision & ML Tools: OpenCV, Open3D, PIL, Pandas, etc.

Model Deployment & Serving: Flask, Docker, AWS Sagemaker, AWS EC2, Torchserve

NLP & LLM Frameworks: Hugging Face, LangChain, OpenAl API

Big Data & Analytics: ElasticSearch, Kibana **Game Engines:** GTA-V Scripthook, Unity

Other Tools: Git, LaTeX

Courses

Statistical Methods in Al

- Computer Vision
- Optimization Methods

- Digital Image Processing
- Mobile Robotics

• Topics in Applied Optimization

Course Projects

3D Reconstruction and Motion Estimation

Oct, 2020 - Nov, 2020

- Generated a dense 3D point cloud reconstruction from stereo image pairs.
- Estimated motion by recovering camera pose using the iterative PnP algorithm.

Pose Graph Optimization for 2D SLAM

Sep, 2020 - Oct, 2020

- Implemented pose graph optimization for a robot using RGBD sensors and wheel odometry to correct trajectory drift.
- Formulated the problem as a graph optimization task and solved using the Levenberg-Marquardt Algorithm.

Metric Learning for Face Identification

Feb, 2020 – Apr, 2020

- Implemented MkNN (Marginalized kNN) for face identification on the LFW dataset using LMNN (Large Margin Nearest Neighbor) with the Mahalanobis metric.
- Improved accuracy by 10% using PCA as a dimensionality reduction technique.

Bilateral Image Inpainting

Sep, 2019 - Nov, 2019

- Implemented convolution-based inpainting using a bilateral averaging kernel that preserves both geometric (spatial) and photometric (range) information.
- Enhanced structure and texture retention in images compared to traditional convolution methods.