(213) 766-8700
kalkar@usc.edu
Los Angeles, CA

Aniruddha Kalkar

Linkedin/AniruddhaKalkar
Github/AniruddhaKalkar
aniruddhakalkar.github.io

Education

Master of Science, Computer Science (Artificial Intelligence), University of Southern California **Aug 2021-May 2023**
GPA: 3.47 / 4.0

Bachelor of Technology, Computer Science and Engineering, Walchand College of Engineering **Aug 2015-May 2019**
GPA: 8.79 / 10.00

Experience

Blackberry Corporation **Oct 2022 - Present**
Machine Learning Engineering Intern Los Angeles
- Detected and categorized malicious programs by developing machine learning models to identify threats to users.
- Built and maintained the treat analysis data sources by collaborating with the data engineering team.

ICAROS Lab, USC **May 2022 - Present**
Volunteer Researcher Los Angeles
- Designed and executed experiments to train 8 different Quality Diversity Algorithms with customized reward signals in 6 reinforcement learning environments like “Slime Volley” and “Car Racing”.
- Analysed effects of learning rates on the optimal score in the RL environments
- Co-Authored “Training Diverse High-Dimensional Controllers by Scaling Covariance Matrix Adaptation MAP-Annealing”

Textify AI **Nov 2021- Dec 2021**
Natural Language Processing Intern Remote
- Optimized generative pre-trained (GPT-NEO) NLP model to auto-generate Natural language content for academic research proposals.
- Improved sentence acceptance rate by 14.7% by enhancing synonym suggestions.

Dassault Systèmes Solutions Lab **June 2019-Jul 2021**
Software Engineering Specialist Pune, India
- Increased product usage across orgarnization by 63% by revamping the front end for the Lifecycle Management Service in the CI / CD Pipeline.
- Designed a prototype using NLP and Machine Learning to recommend QA testing scenarios using software requirements specification documents.

Tata Consultancy Services Research and Innovation **Dec 2018-Apr 2019**
Research Intern New Delhi, India
- Created Novel Metric to analyze Temporal Coherence of labels placed in videos for AR Applications.
- Introduced optical flow to give upto 50x Temporal Coherence improvement for the labels placed in the videos.
- Co-authored ”SmartOverlays” published in WACV 2020.

Publications

- **Training Diverse High-Dimensional Controllers by Scaling Covariance Matrix Adaptation MAP-Annealing**
  PrePrint.
  Authors: Bryon Tjanaka, Matthew C. Fontaine, **Aniruddha Kalkar**, Stefanos Nikolaidis
- **SmartOverlays: A Visual Saliency Driven Label Placement for Intelligent Human-Computer Interfaces**
  IEEE Winter Conference on Applications of Computer Vision (WACV).
  Authors: Srinidhi Hegde, Jitendra Maurya, **Aniruddha Kalkar**, Ramya Hebbalaguppe

Projects

Multi-Teacher Knowledge Distillation for Visual Question Answering Systems
- Designed a light-weight model for VQA systems using ALBEF and VisualBERT as teachers in a multi-teacher setup.
- Model size reduction up to 65x and upto 8x inference speed increase as compared to the teacher models.

Driver Distraction Detection
- Designed and created a driver distraction recognition and notification program based on a live video capture
- Attained 91.08% accuracy for the 10 pre-determined distractions.

Toxic Comment Classification
- Applied Recurrent Neural Networks and classified social media comments into 6 different levels of toxicity.

Technical Skills

Languages	Python, javascript, C/C++, Java, C#, HTML, CSS
Libraries & Frameworks	TensorFlow, Pytorch, Keras, OpenCV, matplotlib, Flask, Django
Databases	MySQL, MongoDB
Tools	AWS, Google Cloud Platform, AWS Sagemaker