Sri Harsha Musunuri

sm2322@rutgers.edu | Santa Clara, CA | | |

EDUCATION

RUTGERS UNIVERSITY
MS in Computer Science
Grad. Jan 2022
New Brunswick, NJ
Cum. GPA: 4.0 / 4.0

NIT, TRICHY (NITT)
B.Tech in Electrical & Electronics Engineering
Grad. May 2016
Trichy, India
Cum. GPA: 7.23 / 10.0

COURSEWORK

Algorithms & Data Structures
AI & ML
Computer Vision
Pattern Recognition
Massive Data Mining
Natural Language Processing
Brain Inspired Computing
Computer Architecture
Computer Networks
Thesis on Generative Models

SKILLS

PROGRAMMING
Over 5000 lines:
Python • C/C++ • Java
Over 1000 lines:
HTML/CSS/JS • SQL

TECHNOLOGIES
PyTorch • TensorFlow • Spark • Kafka
HDFS • Unity3D • OpenCV • Numpy
Pandas • Scikit-Learn • Tableau • Git
MatPlotlib • Jupyter • AWS • Selenium
Spring Boot • Docker • Django • Flask
MongoDB • MySQL • Jira • Git • Junit
Maven • Linux • Eclipse • PyCharm

ML CONFERENCES

Virtual Platform Chair for Multimedia Information Processing and Retrieval **(IEEE MIPR'22)**

LINKS

Github:// **Harsha-Musunuri**
LinkedIn:// **Harsha Musunuri**

RUTGERS SOCIETIES

R.U.D.E Music Band (Guitarist/Singer)
RU Toastmasters (Public Speaker)
RU Indian Grad Association (General Secretary)

PROFESSIONAL EXPERIENCE

DOLBY
Applied Scientist | Oct 2021 - Now

- Designed **Nerf**-based audio-driven 3D talking head synthesizing algorithm with novel-view rendering.
- Developed UNet-based Deep Learning module for film grain noise removal in Videos & improve transmission BD-Rate by 60%.
- Designed MobileNet-based Deep Learning pipeline to predict metadata through scene learnable temporal features for HDR to SDR mapping with **Dolby Vision.**

ARTRENDEX
Deep Learning R&D Intern | Jun 2021 - Sep 2021

- Designed a novel method to extract brush strokes and authenticate Paintings with 3D-CNN enhanced by Self Attention.
- Leading 2 Deep Learning engineers with potential research directions to scale the product for 100+ painters.

CITIGROUP
Sr. Software Engineer | Jan 2018 - Dec 2019 | Chennai, TN, IND

- Managed a 7-member cross-functional QA team and coordinated with 4 business partners (Citi, Visa, MasterCard, RuPay) towards successful launch of QR-code payments solution for APAC and EMEA markets.
- Persuaded APAC QA team towards codeless testing framework Tricentis Tosca and reduced required man-hours by 80%.
- Developed a 5-member cross functional team responsible for certifying 10+ Digital Payments & Settlements related projects for Citibank APAC, EMEA markets.

Software Engineer | Jun 2016 - Jan 2018 | Chennai, TN, IND

- Deployed a data retrieval Web App by designing API services and consuming Internal APIs with Spring Boot. Application is in use by 200 Developers QA Engineers, resulting in reduction of 90% in data preparation time.
- Engineered regression automation test suite in Java-Selenium framework with maven targets for Mobile Banking app increasing test acceleration by 75%.
- Optimized a test automation pipeline for verifying Apple pay life cycle flows involving Citibank backend systems by more than 50% with Java-UFT framework.

DEEP LEARNING PUBLICATIONS:

[1] **SH Musunuri***, L Han*, MR Min, R Gao, Y Tian, D Metaxas. "AE-StyleGAN: Improved Training of Style-Based Auto-Encoders" (Arxiv,). *IEEE Winter Conference on Applications of Computer Vision* **WACV**, **2022**.

ML PROJECTS

CONDITIONAL GAN
Feb 2021 - Jun 2021 | Computer Vision

- Devised class conditional-StyleGAN with projection discriminator to synthesize realistic looking CIFAR-10 data conditionally with an FID 9.13.

SPEECH TRANSFER VIA TRIPLE INFORMATION BOTTLENECK
Jan 2021 - Mar 2021 | Computer Vision,NLP

- Developed a Speech Decomposition model with Information bottlenecks via CNN & BiLSTM networks with a Voice Decision Error of 9.36%.

IMAGE CAPTIONING WITH LSTM & TRANSFORMERS
Aug 2020 - Dec 2020 | Computer Vision,NLP

- Implemented ResNet+LSTM with Attention & ResNet+Transformer architectures to caption Flickr8K Image Dataset with an observed CIDEr score of 0.58.