Pulkit Gera

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CSE-PhD Application Fall 2022

EDUCATION

IIIT HYDERABAD
B.Tech + MS by Research in CS
Expected Aug,2022 | Hyderabad,India
CGPA: 8.77 / 10.0
Bachelors CGPA: 8.65 / 10.0
Masters CGPA: 10.0 / 10.0

COURSEWORK

RESEARCH
Statistical Methods in AI
(Teaching Assistant 2x)
Computer Graphics
Computer Vision
Mobile Robotics
Optimization Methods
Multivariate Analysis

COMPUTER SCIENCE
Data Structures
Operating Systems
Database Systems
Algorithms
Advanced Computer Networks
Unix Tools and Scripting

SKILLS

PROGRAMMING
Languages
Python • C++ • Shell • Javascript
GO • Matlab • SQL • Ruby on Rails
Libraries
Mitsuba 2 • COLMAP • PyTorch •
Tensorflow • OpenGL
Technologies
Github • Docker

ACHIEVMENTS

AWARDS
•Secured first position in Megathon,2019 in Big Data Track
•Placed in top 25 contributors out of 700 people in Girlscript Summer of Code 2018
•Finished 3rd in AIcrowd Blitz,out of 350+ teams

POSITIONS
•Head Finance, E-Cell,IIIT Hyderabad(2019)
•Web Admin, E-Cell,IIIT Hyderabad(2018)

PUBLICATIONS

Neural view synthesis and appearance editing from unstructured images. Pulkit Gera, Aakash KT, Dhawal Srikonda, PJ Narayanan. Indian Conference on Computer Vision, Graphics and Image Processing 2021

RESEARCH

CENTER FOR VISUAL INFORMATION TECHNOLOGY | Research Assistant, Advisor : Dr P.J. Narayanan
May 2018 – Present | Hyderabad, India
Formulated a neural rendering framework for view synthesis and appearance editing of a scene from unstructured images captured under known environment illumination. Work resulted in an ICVGIP 2021 Publication.

INFORMATION RETRIEVAL AND EXTRACTION LAB | Independent Study, Advisor: Dr Vasudeva Verma,Dr Balaji Vasan Srinivasan
July 2020 – June 2021 | Hyderabad,India
Worked on multimodal news summarization. Leveraged visio-linguistic transformers like OSCAR to encode visual and textual information and GPT as decoder to summarize the article.

UNIVERSITE DE LAVAL | Research Intern, Advisor: Dr Jean Francois Lalonde
May 2021 – Present | Hyderabad, India
Encoded indoor scenes captured as panoramas using neural radiance fields to perform novel view synthesis. Generated outputs at high resolution and were robust to different illumination settings. .

EXPERIENCE

SEGMIND SOLUTIONS | Deep Learning Intern
Aug 2020 - Oct 2020 | (Remote)Bangalore,India
- Ported multiple object detection and semantic segmentation algorithms into a single framework
- Reduced lines of code to setup an object detection framework to 5 lines.

AICROWD | Technical Staff
October 2019 – June 2020 | (Remote)Geneva,Switzerland
- Designed over 200 questions to be used in various challenges.
- Made benchmarks and tested different research based challenges.

DREAMVU INC | Computer Vision Intern
June 2019 – July 2019 | Hyderabad,India
- Designed tools to benchmark images captured with various SOTA algorithms.
- Assisted in capturing data and improving image quality captured by the camera.

PROJECTS

Mip NeRF
Pytorch port of Multiscale Representation of Anti Aliasing Neural Radiance Fields. Generate high resolution inference images without aliasing artifacts.

Instance Saliency Detection
Attention based salient instance segmentation method that produces a saliency mask with distinct object instance labels for an input image