Pratik VAISHNAVI

PERSONAL DATA

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EDUCATION

MAY 2018 | Master of Science in COMPUTER SCIENCE, **Stony Brook University**, NY
GPA: 3.70/4.00 | List of Courses Taken

MAY 2016 | Bachelors of Technology Degree in ELECTRONICS
Sardar Vallabhbhai National Institute of Technology, India

WORK EXPERIENCE

AUGUST 2018
PRESENT | Teaching Assistant at Computer Science Dept., Stony Brook University
Course: CSE 512 Machine Learning

JUNE 2017
MAY 2018 | Research Assistant at DATA SCIENCE LAB, Stony Brook University
Supervisor: Prof. Steven Skiena

Worked on video analysis algorithms to analyze freight train movements across the NY state. This involved:

- Temporally isolating the 'train period' in long untrimmed video sequences of train crossings.
- Cropping out images for each car in the train, from the trimmed video.
- Extracting information (like ID number) from these train cars using OCR methods.
- Performing in-depth analysis on the flow of goods between regions based on the information collected from the videos.

MAY 2015
JULY 2015 | Research Intern at INDIAN INSTITUTE OF TECHNOLOGY, Kharagpur
Guide: Prof. Rajeev Ranjan Sahay

Worked on applying deep learning methods for classification of dynamic hand gestures in trimmed video sequences. Investigated the effect on performance on using different inputs like Motion History Images and Gait Energy Images. Also analyzed the performance of transfer learning using models pre-trained on a wide variety of datasets.

PUBLICATIONS

2017 | Robust Pose Detection using Deep Learning
Proceedings of International Conference of Computer Vision and Image Processing

2016 | Nrityabodha: Towards understanding Indian classical dance using a deep learning approach
Signal Processing: Image Communication, Elsevier

Major Projects

AUGUST 2018 PRESENT	**Adversarial attacks on visual recognition models** *Guide: Prof. Amir Rahmati* Investigating and developing adversarial attacks on sate-of-the-art visual recognition models.
JUNE 2017 MAY 2018	**Temporal action proposals in long untrimmed videos** *CSE-599 MS Thesis | Guide: Prof. Minh Hoai Nguyen* Developing a model to tackle the task of temporal detection of human action in long untrimmed video sequences.
FEB 2017 DEC 2017	**Multi-layer Neural Composer for Personalized Product Descriptions** *Guide: Prof. Niranjan Balasubramanian* Investigating neural generation methods as a scalable approach for delivering personalized descriptions.
JAN 2017 MAY 2017	**Large scale video understanding** *Guide: Prof. Minh Hoai Nguyen* Investigated the effectiveness of various deep learning models for labelling videos based on their content.

Computer Skills

Languages:	PYTHON, C, C++
Deep Learning:	PYTORCH, TENSORFLOW
Operating Systems:	MACOS, LINUX, WINDOWS
Miscellaneous:	MATLAB, IPYTHON NOTEBOOK, LaTeX, GITHUB, BITBUCKET

Languages

HINDI:	Mothertongue
ENGLISH:	Fluent

Extracurricular

- Member, Literary Affairs Committee at SVNIT
    - Organized and hosted multiple events including debates, quizzes and spelling bee.
    - Instituted a library for novels through student donations.
- Editor, Renesa - College Newsletter of SVNIT
    - Edited and wrote articles for the newsletter.
- Participated in organizing multiple college events at SVNIT like the technical and cultural fests, and sports tournaments.

Master of Science in COMPUTER SCIENCE

Grades

COURSE	GRADE
Introduction to Computer Vision	A-
Analysis of Algorithms	A-
Operating Systems	B
Machine Learning	A-
Probability and Statistics	A-
Natural Language Processing	A-
CSE 599, MS Thesis (Sem 1)	A
CSE 599, MS Thesis (Sem 2)	A
Data Science Fundamentals	A-
Independent Project on Language Generation	A
Artificial Intelligence	A-