**PRATIK VAISHNAVI**

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**EDUCATION**

**STONY BROOK UNIVERSITY Stony Brook, New York**

* Masters in Computer Science. **CGPA**: 3.67/4  *May 2018*
* Coursework: Operating Systems, Analysis of Algorithms, Introduction to Computer Vision, Machine Learning, Probability and Statistics, Natural Language Processing, Data Science Fundamentals.

**Sardar Vallabhbhai National Institute of Technology, SURAT Surat, India**

* Bachelor of Technology, Electronics & Communication Engineering. **CGPA**: 7.34/10 *May 2016*

**WORK EXPERIENCE**

**DATA SCIENCE LAB, STONY BROOK UNIVERSITY, NY** *Research Assistant Jun 2017 - present*

**Supervisor:** Prof. Steven Skiena

**Project Brief**: Working on video analysis algorithms to analyze freight train movements across the state of NY.

**Technology used:** Python, Pandas, Numpy, Scikit-learn, OpenCV-python

**INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR, INDIA** *Research Intern May 2015 – Jul 2015*

**Problem Statement –** Dynamic hand gesture recognition using deep learning algorithms.

**Project Description –**

* Developed a model to detect dynamic hand gestures in spatio-temporal data.
* Synthesized a dataset suitable to the problem being tackled.
* Presented detailed analysis and performance results on multiple datasets.
* Results were published in two international research papers.

**Technology Used:** Python, MATLAB, Matconvnet, Theano, Lasagne, OpenCV-python, Scikit-Learn, Convolutional Neural Networks, Stacked Auto-encoders, Transfer Learning

**SELECT PROJECTS**

* **Temporal action proposals in long untrimmed videos** (CSE-599, MS Thesis)

**Guide:** Prof. Minh Hoai Nguyen

Developing a sequence-encoding model to generate temporal action proposals in long untrimmed videos.

**Technology Used**: Python, Lasagne, PyTorch

* **Multi-layer Neural Composer for Personalized Product Descriptions**

**Guide:** Prof. Niranjan Balasubramanian

Investigating neural generation methods as a scalable approach for delivering personalized descriptions.

**Technology Used** - Python, NLTK, pandas, Tensorflow, Sequence to sequence models, LSTMs, GRUs

* **Large scale video understanding using deep learning**

**Guide:** Prof. Minh Hoai Nguyen

Investigated the effectiveness of various deep learning models for labelling videos based on their content.

**Technology Used**: Python, Tensorflow, CNNs, LSTM, Encoder-Decoder networks, Learnable-pooling methods (VLAD, Fischer vectors etc.)

**PUBLICATIONS**

* **Nrityabodha: Towards understanding Indian classical dance using a deep learning approach**, Aparna Mohanty et. al. Role: Co-Author | Signal Processing: Image Communication, Elsevier | Volume 47, September 2016, Pages 529–548
* **Robust Pose Detection using Deep Learning**, Aparna Mohanty et. al. | Role: Co-Author | Proceedings of International Conference of Computer Vision and Image Processing CVIP-2016 | Advances in Intelligent Systems and Computing (AISC), Springer | Volume 2, Page 94

**TECHNICAL SKILLS**

**Programming Languages**: Python, JQuery, C, C++, **Databases:** PostgreSQL, **Toolboxes:** MatConvnet, Theano, Lasagne,

Caffe, OpenCV-Python, Scikit-Learn, Flask, Requests, **Software:** MATLAB, LaTeX, **Others:** GitHub, Docker, Postman