Pratik Vaishnavi
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ACADEMIC DETAILS

Degree	University	Department	Duration	CGPA
MS	Stony Brook University	Computer Science	2016-2018	3.70/4
B.Tech	National Institute of Technology, Surat	Electronics	2012-2016	7.43/10

WORK EXPERIENCE

- **Research Assistant | Data Science Lab, Stony Brook University | Jun'17 - present**
  Description: Developing a video analysis pipeline to analyze the movement of freight trains across NY state. The pipeline contains the following modules:
  1. Train detection module (using audio-visual data stream): To detect the entry of the train in frame of the video being captured. Used to trigger our sensor to record videos of train crossings.
  2. Video analysis module: Takes as input a trimmed video sequence of a train crossing, and extracts useful information from it. It also extracts one cropped image per car in the train.
  Languages/Toolboxes: Python, mySQL, Python Libraries (OpenCV, Scikit-Learn. SciPy, Flask, Requests)
- **Technology Consultant | BOMPOD SOLUTIONS PVT. LTD. | Jan'16 - July'16**
  Description: Supervised and contributed in the development of the technological framework of this fresh produce supply-chain optimization start-up. Additionally, developed a custom POS and Inventory Management System suitable to the business operations, from scratch. The final framework consisted of 2 Android apps and 2 web apps.
  Languages/Toolboxes: Python, JQuery, SQL, HTML, CSS, AJAX, Docker, BitBucket, Python Libraries (Flask, Requests)
- **Research Intern | Indian Institute of Technology, Kharagpur | May'15 - July'15**
  Description: 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.
  Languages/Toolboxes: Python, Theano, Lasagne, Python Libraries (OpenCV, Scikit-Learn, Scipy)

MAJOR PROJECTS

- **Temporal Action Localization** (CSE-599, MS Thesis)
  (Guide: Prof. Minh H. Nguyen , Aug'17 - present)
  - Developed multiple approches for generating temporal action proposals in long untrimmed videos, using RNNs as sequence encoders.
  - Languages/Toolboxes: Python, PyTorch, Lasagne
- **Multi-layer Neural Composer for Personalized Product Descriptions**
  (Guide: Prof. Niranjan Balasubramanian and Prof. Yejin Choi , Feb'17 - present)
  - Investigating neural generation methods as a scalable approach for delivering personalized descriptions.
  - Languages/Toolboxes: Python, Tensorflow, PyTorch, Stanford Parser, Python Libraries (NLTK, BeautifulSoup, Pandas)

PUBLICATIONS

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

SKILLS

- **Languages** (Python, JQuery, C, C++, SQL), **Software** (MATLAB, LaTeX), **Toolboxes** (PyTorch, Tensorflow, Theano, Lasagne, MatConvnet, OpenCV-Python, Scikit-Learn, Flask, Requests, Pandas, Jupyter notebook), **OS** (Mac OS, Linux, Windows), **Databases** (mySQL), **Other development tools** (GitHub, BitBucket, Docker, Postman, Hasura).

AWARDS AND ACHIEVEMENTS

- Best Solution, License Plate Recognition Challenge organized by Wipro Ltd on *www.greymeter.com (Jun'15).*

EXTRACURRICULARS

- Editor, Renesa - NIT Surat college newsletter
- Member, Organizing Committee - Literary and Debating Club, NIT Surat
- Co-coordinator, organizing committee | MindBend - Technical fest and Sparsh - Cultural fest | NIT Surat.