Vismay Patel

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Education

Program	Institution	Year of Completion
M.S. (Computer Science and Engg.)	Indian Institute of Technology Madras	2018
B.Tech. (Information Technology)	Institure of Technology, Nirma Uni.	2014
HSC (Gujarat Board)	Shree Vidhyanagar High School	2010
SSC (Gujarat Board)	Shree Vidhyanagar High School	2008

Course Work

- **Machine Learning**: Introduction to ML, Kernel Methods for Pattern Analysis, Artificial Neural Networks
- **Computer Vision**: Geometry and Photometry-based CV, Digital Video Processing, Computational Photography

Professional Experience

Machine Learning Engineer 1 **April 2020 - Present**
Verisk, Hyderabad, India

- Document Information Extraction, Document Similarity, Annotation platform for Unstructured Data

Software Development Engineer 1 **August 2018 - April 2020**
Codenation LLC, Bangalore, India

- ML Factory. End-to-end pipeline for streamlining model building procedure on structured data. Technologies used: AWS Sagemaker, Django.
- Time-series forecasting and analysis for Industry Sensor Control. Technologies used: Keras, Tensorflow, Pandas, AWS Sagemaker, Django, node-red.
- Static code analysis for automatic code cleanup. TechnologiesEricsson used: Neo4j, spring boot, AWS services.

Internship **February 2018 - April 2018**
Find Me A Shoe, Chennai, India

- Pose estimation techniques to accurately detect 4 corners of a paper.

Publications

- **Vismay Patel**, Niranjan Mujumdar, Prashanth Balasubramanian, Smit Marvaniya, and Anurag Mittal. "Data Augmentation using Part Analysis for Shape Classification." In WACV 2019.

- Arulkumar Subramaniam, **Vismay Patel**, Ashish Mishra, Prashanth Balasubramanian, and Anurag Mittal. "Bi-modal first impressions recognition using temporally ordered deep audio and stochastic visual features." In Computer Vision–ECCV 2016 Workshops, pp. 337-348. Springer International Publishing, 2016.

- Anubha Pandey, **Vismay Patel**, "Generative Image Inpainting for Person Pose Generation" and "Joint Caption Detection and Inpainting using Generative Network" published as two chapters in the Springer book title "Inpainting and Denoising Challenges".

Key Projects

Data Augmentation using Part-based Deformations of Shapes (Matlab, Torch) **Aug 2015 - Feb 2018**
Guide: Prof. Anurag Mittal *M.S. Project, Team Size:1*

- Thesis research work, to address the problem of learning good image classifiers with limited labeled data.
- We propose to use the part analysis of shapes extracted from available images to augment the labeled data.
- We show improved performance with CNN classifiers for shape classification task using such augmentation.

Video and Image inpainting (Python, Pytorch) **March 2018 - May 2018**
Competition, Team Size:2

- Done it as part of challenges organized by Chalearn Looking at People on Image and Video Inpainting.

- Employed GAN based techniques to do removal of captions from videos and images.
- Scored 3rd rank in the competition.

Personality Analysis from Inerview Videos (Lua,Torch) **May 2016 - Aug 2016**

Competition, Team Size:4

- Done it as part of "First Impressions" challenge organized by Chalearn Looking at People.
- Designed and Implemented a Deep Learning based solution for Personality Analysis from Videos. Employed a novel training technique for videos.
- Scored 2nd rank in the competition.

Other Projects

Human pose transfer (Pytorch) **Oct 2017 - Nov 2017**

Faculty: Dr. Mitesh Khapra, Topics in DL *Course Project, Team Size:2*

- Used Variational Autoencoders to transfer pose of one image to the human in another image.

Gesture Recognition for DVS camera (Matlab) **Aug 2016 - Nov 2016**

Faculty: Dr. Kaushik Mitra, Computational Photography *Course Project, Team Size:2*

- Used Dynamic Time Warping with compressed binary features to match two gestures captured using a DVS camera.

Using CNN features with Hough Forest for Pedestrian Detection (Matlab,Caffe) **Nov 2015 - Jan 2016**

Faculty: Dr. Anurag Mittal, Artificial Neural Networks *Course Project, Team Size:1*

- Used features generated from initial few layer of pretrained CNNs to do fast Pedestrian Detection using Regression Forest as Hough Voting functions.

Technical Skills

- **Languages**: Python, Java, Lua.
- **Computer Vision,Deep Learning Frameworks** - Tensorflow, PyTorch, keras, Torch, Caffe, OpenCV.
- **Other tools/frameworks** - Matlab, AWS Sagemaker, Neo4j, node-red.

Positions of Responsibility

- Teaching assistant for the courses: Artificial Neural Networks, Geometry and Photometry-based CV, Fundamentals of Computer System Design.
- Served as the Administrative Head for IEEE student branch, Nirma University, academic year 2013-14.
- Served as a coordinator for Radiance 2012, organized by IEEE student branch, Nirma university.
- Served as a volunteer in Move Towards Light (an event to counsel the village students about various career options) conducted under Women In Engineering affinity group, Nirma University.

Achievements and Participation

- Won 3rd prize (ECCV '18) in the challenge on "Video Decaptioning" organized by Chalearn Looking at People.
- Won 2nd prize (ECCV '16) in the challenge on "First Impressions" organized by Chalearn Looking at People.
- Attended Summer School on Deep Learning organized by CVIT, IIIT Hyderabad in the year 2016.
- Successfully created a Windows app at Microsoft code.fun.do 24 hour Hackathon, IIT Madras.

Guide Details

- Dr. Anurag Mittal, Professor, Department of Computer Science and Engineering, IIT Madras, Chennai. (http://www.cse.iitm.ac.in/amittal/)