Prateek Shrivastava

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Date of Birth	February 12,1994	**Email**	shrivastava94prateek@gmail.com
Nationality	Indian		

Research Interest

Deep Learning, Computer Vision

Education

2012-2016 B.Tech in Electronics and Communication - Indian Institute of Technology Roorkee

Cumulative Grade - 7.551/10

2012 All India Senior School Certificate Examination(AISSCE)-
Royal Senior Secondary School

Twelfth Percentage (AVG.) - 89.8%

Job Experience

July 2016 - Present **Qualcomm India Private Limited**
Associate Engineer, Video Team

Developed and supported software solutions to video codecs on Qualcomm chipsets.
Enabled MPEG4, H263 encoder in google glass. Also worked on android watches.
Profiled MPEG4 and H263 software encoders and decoders which included power consumption, bitrate optimization etc. on upcoming Snapdragon 845.
Worked on VC1 decoder which will do parallel parsing and decoding on cDSP(compute Digital Signal Processor) communicating to Apps Processor via Remote-Procedural-Call protocol in Snapdragon 845.
Implemented Rotation API to rotate a video while encoding in Open-Max platform.

Projects

Jan 2016 - April 2016 **Bachelor Thesis Project (B.T.P)**
Image Classification

Performed feature extraction using SIFT algorithm on images dowloaded using flickr-API to get training data for 6 classes of furniture images.
Applied K-means clustering on extracted features after normalization and illumination reduction. Used BruteForce L2 matcher on cluster centers to obtain histograms of images as training data to be fed into SVM (Linear Kernel).
Optimization of some hyperparameters like feature extraction algorithm (SIFT, SURF etc.), number of features and number of cluster centres. Also optimized ratio of positive training data and negative training data in this One VS All methodology, observed higher accuracy with less skewed data.

May 2015 - July 2015 **Zimply**
Auto Tagging Feature

Used Bag of Words approach on SIFT (Scale Invariant Feature Transform) features to train a SVM (Support Vector Machine) classifier. The purpose was to build a recommendation system which will show images similar to input image of home decorative items present in the company's database.

Aug 2013 - Feb 2014 **ABU ROBOCON 2014**
Arduino Programming

Programmed and built two bots(one automatic and one manually controlled) in which the manual bot was supposed to place automatic bot on several platforms to accomplish four tasks namely pole-climbing, play on a see-saw, swing and jungle gym. Used IFM sensors for curvature tracking, detection of platform thereby controlling actuators. Our team achieved 5th position in this competition at national level.

Skills and Achievements

- **Additional Courses Taken**

  Machine Learning
  Neural Networks and Deep Learning
  Hyperparameter Tuning
  Structuring Machine Learning Projects
  Convolutional Neural Networks for Visual Recognition
  Data Structures
  Computer Architecture
  Computer Networks

- **Programming Languages**

  C/C++, Python, GNU Octave, HTML, CSS

- **Achievements**

  (2012) All India Rank 1225 (amongst 480k candidates) in IIT-JEE(Joint Entrance Exam).
  (2012) Awarded prestigious KVPY Scholarship organised by the Government of India.
  (2014) 5th position at National level as a member of team Robocon IIT-Roorkee.

Extra Curriculars

- **Choreography and Dance Section**

  (2013-14) Secured 1st Position in FOOTLOOSE (Inter-College Dance Competition).
  (2014-15) Appointed as JOINT SECRETARY of the Section.
  (2015-16) Appointed as ADDITIONAL SECRETARY of the Section.

- **COGNIZANCE (Tech-Fest IITR)**

  (2014) Co-cordinator of Robosapiens (Inter-College Robotics competition).
  (2015) Secured 1st position in Inter-College advertisement making competition.

- **NSS (National Service Scheme)**

  (2012) Member of Social Awareness cell NSS at IIT Roorkee.