RAKESH BAL

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EDUCATION

Indian Institute of Technology Kharagpur   *July 2016 - Present*
Department of Computer Science and Engineering   Overall CGPA: 9.56/10
Bachelor Of Technology(Hons.)

Baxi Jagabandhu Bidyadhar Junior College   *July 2014 - May 2016*
Council Of Higher Secondary Education, Odisha   Overall Percentage: 89%
Intermediate In Science

St. Joseph's High School   *April 2011 - May 2014*
Indian Certificate of Secondary Education   Overall Percentage: 96%
Matriculation

INTERESTS

Machine Learning and Artificial Intelligence   **Computer Vision**

TECHNICAL STRENGTHS

Programming Languages	C, C++, MATLAB/Octave, Python, JavaScript
Software & Tools	OpenCV, ROS, Git, LaTeX
Web Development	HTML, CSS
Machine Learning	TensorFlow, Scikit-Learn

RESEARCH EXPERIENCE

Autonomous Underwater Vehicle, IIT Kharagpur   March 2017 - Present
Guide: Prof. C S Kumar

· Studied and implementing Faster R-CNN for Real-Time Object Detection and Localization.
· Used Actionlib and Smach Packages of ROS to create Mission Planner Stack on Kraken 4.0.
· Used OpenCV and ROS to implement HSV Thresholding on ROSBAG files for Buoy Detection.
· Implemented Canny Edge Detector as part of Edge Detection using OpenCV in C++.

PROJECTS

Movie Recommender App-Synisto(Under Construction)   August 2017 - Present
IIT Kharagpur   *Self Project*

· Used Collaborative Filtering based algorithm to train on Modified MovieLens Dataset.
· Added Recommendation for new users based on ratings of few movies.
· Tools Used- Scipy, Numpy.

K Means Compressor   August 2017
Machine Learning Coursera   *Course Project*

· Implemented KMeans Clustering algorithm to find dominant colors in an image.
· Achieved a 6 times reduction in size by using only the dominant colors for Image Representation.
· Tools Used- Octave.

ACADEMIC ACHIEVEMENTS

Secured All India Rank of 265(amongst 200,000 candidates) in IIT-JEE Advanced 2016.

Outperformed in Electrical Technology course securing an EX grade given only to exceptionally performing students (top 1 percent).

Ranked in National Top 0.014% (amongst 13,00,000 candidates) in JEE Mains 2016 with an All India Rank of 187.

Qualified Kishore Vaigyanik Protsahan Yojana (Written and Interview) in SX stream (Organized by Indian Institute Of Science, Bangalore) with an All India Rank of 191.

Qualified National Talent Search Examination conducted by NCERT in Xth standard and had secured 3rd rank in the state level stage of the exam.

Qualified for Indian National Physics, Chemistry and Astronomy Olympiad conducted by HBCSE.

RELEVANT COURSES

Core Courses	**Other Courses**
Programming And Data Structures	Machine Learning (Coursera)
Algorithms-I(ongoing)	Deep Learning Specialization(Coursera)
Discrete Structures(ongoing)	CS231n: CNNs for Visual Recognition(ongoing)
Signals And Networks(ongoing)	Introduction To Computer Vision(Udacity)

POSITION OF RESPONSIBILITY

Spring Fest 2016   January 2017 - Feb 2017
Crew Member   *IIT Kharagpur*

· Managed the performance of international artists during the fest.
· Successfully organized Shuffle Event and prepared music tracks for the event.
· Managed the Youth Marathon during the fest.

EXTRA-CURRICULAR ACTIVITIES

Participated as a cadet at National Cadet Corps, IIT Kharagpur taking part in Republic Day Parade.

Represented LBS Hall, IIT Kharagpur in InterHall Maths Olympiad General Championship.

Qualified for semifinals of debating tournament conducted by Debating Society, IIT Kharagpur.

Secured 4th position in the Science Quiz held by Institute Of Physics, Bhubaneswar.

Secured 5th position in Rakesh Memorial Chess Championship at Puri.