AMEGH BHAVSAR

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EDUCATION

Indian Institute of Technology Kharagpur July 2015 - Present
B.Tech + M.Tech in Biotechnology and Biochemical Engineering *Kharagpur, India*
CGPA: 7.41/10

Vidyasar School Grad. May 2015
All India Senior School Certificate Examination *Indore, India*
Percentage: 88.0%

INTERNSHIPS AND PROJECTS

Ideaforge Technologies | *Computer Vision Intern* December 2018
- Conducted extensive literature review and performance analysis of several image super-resolution algorithms
- Developed an application for image and video super-resolution based on TensorFlow implementation of **DCSCN**

Pixean | *Machine Learning Intern* May 2018 - June 2018
- Designed recommendation engine for content projection and engagement based on user interest and activity
- Designed image quality filters to skim out the irrelevant uploads and tested the algorithm on 600 images
- Used **Google Cloud Vision API** to implement auto-tagging and genre suggestion for images
- Developed a tag-based search algorithm for images and blogs using **Natural Language Toolkit** and **ElasticSearch**

Swarm Robotics IIT Kharagpur | *Software Team Member* March 2016 - Present
Guide: Prof. Somesh Kumar, Prof. Pallab Dasgupta *Kharagpur, India*
- Tested and optimized the **Artificial Potential Field** algorithm for path planning of mobile robots on a simulator
- Accomplished localization of mobile robots using AprilTags via image feed from an overhead camera in C++

Transcription Network Dynamics | *B.Tech. Project* July 2018 - Present
Guide: Prof. Riddhiman Dhar *Kharagpur, India*
- Working on hierarchical clustering of the gene expression data to understand dynamics of gene regulatory networks

3D Image Stitching | *Image Processing Term Project* October 2018
Guide: Prof. Partha Pratim Das *Kharagpur, India*
- Implemented panoramic stitching of 72 images by calculating homographies using **RANSAC** and OpenCV libraries
- Used **SIFT** for feature extraction and **FLANN** based matcher to find corrospondance between the images

TECHNICAL SKILLS

- **Languages** : **Proficient:** C, C++, Python | **Intermediate:** MATLAB, JavaScript
- **Tools & Libraries** : OpenCV, TensorFlow, Git, ROS, Gazebo, ElasticSearch, MySQL
- **Hardware** : Raspberry Pi, Arduino

RELEVANT COURSEWORK

- **Undergraduate** : Partial Differential Equations, Probability and Statistics, Programming and Data Structures, Computational Neuroscience, Image Processing, Data Analytics*
- **MOOC** : Neural Networks and Deep Learning, Convolutional Neural Networks for Visual Recognition, Machine Learning, Computational Motion Planning, Introduction to Algorithms*

*** indicates ongoing courses**

POSITIONS OF RESPONSIBILITY

Gopali Youth Welfare Society | *Vice President* April 2018 - Present
(GYWS is a registered NGO run by students of IIT Kharagpur providing free of cost education to 220 underprivileged children)
- Administered overall functioning of the organization as a part of its 13 member apex governing body
- Handled a budget of INR 34,00,000 to run Jagriti Vidya Mandir, a primary English-medium school run by GYWS