JAYSINGH

E-mail: jaysingh@iitk.ac.in
Phone: +91-9079866003

3rd Year Undergraduate
Department of Material Science and Engineering, IIT Kanpur

EDUCATIONAL QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI / %
2017-Present	B.Tech (Material Science and Engineering)	Indian Institute of Technology	7.0/10
2016	Class XII (RBSE)	Gudha Public School	91%
2014	Class X (RBSE)	Gudha Public School	83%

SCHOLASTIC ACHIEVEMENTS

- Secured an All India Rank of **1781(OBC)** among **1.7 lakh** candidates qualified for **JEE Advanced 2017**
- Secured an All India Rank of **1953 (OBC)** among **13 lakh** students in **JEE Main 2017**
- Awarded with **Best Project** in two courses TA201A(Manufacturing Processes I) with a team of 6 students and in TA202A (Manufacturing Processes II) with a team of 7 students

TECHNICAL SKILLS

- **Object Oriented Programming** - Java
- **Programming Language -** C, C++, Python, JavaScript MATLAB
- **Mobile application framework and Server side development –** React Native, Nodejs, Express, MongoDB
- **Development Tools-** Postman**,** Visual Studio, Git, AutoCAD Fusion 360

KEY PROJECTS

Restaurant Menu App

- Develop a responsive menu app by using React Native and redux and use Node.js, Express and MongoDB for server side
- Ordinary user can see the Menu of the Restaurant without authentication. Registered and authenticated users can reserve Table, add and remove dishes from their favorite list, comment them and uncomment their own comment.
- Only admin can see the list of all the registered users, can add new dishes into the menu and remove dishes from menu
- Use Expo SDK to access native capabilities of the device like Local Notifications, Social sharing, Network Information, Image picking from gallery and obtain image from camera
- Use jsonwebtoken and Oauth2 authentication with facebook, https for secure communication, cookies and Express sessions for tracking authenticated users at server side.

Semantic Segmentation

- Improve accuracy on Indian Driving Dataset using already build model on MIT ADE20K dataset
- Used encoders are MobileNetV2dilated , ResNet18/ResNet18dilated, ResNet50/ResNet50dilated,HRNetV2 (W48)
- Used decoders are C1 (one convolution module), C1_deepsup (C1 + deep supervision trick), PPM (Pyramid Pooling Module), PPM_deepsup (PPM + deep supervision trick), UPerNet (Pyramid Pooling + FPN head)
- Model is implemented in deep learning platform pytorch

Machine Learning Online Project | Skyfi Labs *(May-June 2019)*

° ***Movie Recommendation System***

- Build a recommendation system using KNN (K-Nearest Neighbors) model of sklearn library of python
- Model find out 10 best matching movies to the searched movie from the list of movies data and recommend k best similar movies for that 10 movies
- Used various libraries such as numpy, pandas, matplotlib, sklearn, csr_matrix from scipy library and SequenceMatcher

° ***Boston housing Model***

- Build **Linear Regression** model by selecting one highly correlated feature on Boston house price dataset
- Preprocess the dataset using MinMaxScaler and optimize the model using batch gradient decent optimization
- Use various libraries such as numpy, pandas, matplotlib, sklearn and train_test_split function for splitting dataset

CERTIFICATES

- Server Side Development with NodeJS, Express and MongoDB (on Coursera)
- Multiplatform Mobile App Development with React Native (on Coursera)
- **Deep Learning Specialization (4 Courses on Coursera)**
  - Neural Network and Deep Learning
  - Improving Deep Neural Networks : Hyperparameter tuning, Regularization, Optimization
  - Structuring Machine Learning Projects
  - Convolutional Neural Network : Implement yolo algorithm, Face recognition system and Neural style transfer

RELEVANT COURSES

Fundamental of Computing (ESC101A)
Introduction to Electronics (ESC201A)
Introduction to Microeconomics
Computational Methods in Engineering
Real Analysis and Calculus (MTH101A)
Philosophical Logic (PHI455A)
Applied Probability and Statistics
Partial Diff. Equation (MSO203B)
Quantum Physics (PSO201A)