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Indian Institute of Technology, Bombay

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B.Tech.
Gender: Male
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| Examination | University | Institute | Year | CPI / % |
|-------------|------------|------------|------|---------|
| Graduation | IIT Bombay | IIT Bombay | 2021 | |

PROFESSIONAL EXPERIENCE

Product Engineer at StampMyVisa | Part-time job

Feb - March 2019

- Developed a fully featured community forum for stampmyvisa.com including the front-end for the forum
- Developed a **CRUD system** for moderating the website for moderators
- Contributed to the **REST API** to serve the visa information which is used by the mobile application to fetch relevant information according to the customer's needs
- Integrated third party API for foreign currency exchange and integrated **Razorpay** payment gateway

Software Engineer for Gigtrack Technology LLC | Freelance project

July 2020 - Present

- Designed and developed a platform for real time collaboration of music projects using web technologies
- Developed an audio editor using **Web Audio API** and wavesurfer.js (Web Audio API wrapper)
- Designed a database model using **Firestore** and firebase cloud storage for storing and fetching the relevant files
- Implemented **video capture** on web to add videos of collaborators to the music project
- Implemented live **video call** for multiple users to collaborate in real time using mesh networks
- Successfully hosted the web application on a domain using **cpanel**

Developed a 3D Model viewer and interactive editor for dentists | Freelance project

Nov - Dec 2019

- Developed a web based interactive 3D dental model viewer using an open source javascript library "**Three JS**"
- Implemented **user interactions** with model to add and represent the information on real time 3D model
- Implemented **real time sculpting** over 3D surface to add and visualize the dental faults
- Developed different sculpting brushes which can pull, push and smoothen the geometry of the 3D model

PERSONAL PROJECTS

Developed a web application as a tool for Airline Scheduling

May - June 2020

- Modelled and implemented **genetic algorithm** to get approximate optimal solution for Airline Schedule
- Implemented **web workers** to run the solution on a different thread resulting in a non-UI-blocking application
- Implemented a third-party library "**Chart.js**" to visualize and analyse the solution

Developed a web application for planning, tracking and executing trips (Node.js, React)

April - June 2020

- Designed and developed a **Node.js backend** for adding, storing and fetching the trips made by users
- Implemented **OpenStreetMap API** to fetch and serve the map data using an **express server**
- Implemented **Mapbox SDK** for React to represent and visualize the OpenStreetMap data on interactive map
- Created wiki data scraper to fetch place information and implemented **Flickr API** for showing pictures of places

Developed a real time Image Processing application (Computer vision)

Nov - Dec 2017

- Successfully developed a live video masking application using **OpenCV** for python to remove the background and extract the subject from a webcam stream (Live green screen)
- Developed a UI for the application using **Tkinter** library in python to select a color to be masked out from stream
- Implemented screenshot capture functionality to save the results of masking while capturing webcam stream

Flappy bird AI | Evolving neural network (Tensorflow JS)

August 2020

- Successfully created a Flappy bird game on the web using HTML canvas and JavaScript
- Created a neural network model using **Tensorflow JS** and implemented a genetic algorithm for **evolving neural network**, converging to the best approximation for the flappy bird AI agent which can score indefinitely

TECHNICAL SKILLS

languages: JavaScript, Python, C#, Java, Dart (Flutter)

Tech stack: React, Node.js, MongoDB, firestore

HOBBIES

Creating 3D environments | video games | Learning about real time graphics | Japanese language