

SUMANYU GHOSHAL

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EDUCATION

Indian Institute of Technology Bombay
B.Tech. in Computer Science & Engineering (9.41/10)

July 2018 - Present

ACADEMIC ACHIEVEMENTS

2019	Institute Academic Prize for exemplary Academic Performance (top 2.5%)	<i>IIT Bombay</i>
2018	All India Rank 160 , JEE Advanced (Out of 160,000+ candidates)	<i>IIT Kanpur</i>
2018	Scored 396/450 in BITSAT Entrance Exam	<i>BITS, Pilani</i>
2018	Recommended for Scholarship for Higher Education , INSPIRE Scheme	<i>Govt. of India</i>
2015	National Finalist , Young Talent Search in Computer Programming	<i>CSI</i>

EXPERIENCE

Prodigal Technologies LLC *Summer Data Scientist*
Voice Biometrics *April - July 2020*

- Developed a Siamese Neural Network-based model to generate similarity scores between audio clips
- Used Transfer Learning to fine-tune the model for different clients to improve the client-wise accuracy
- Developed an internal-use only API to generate low/medium/high similarity labels for audio clips

PROJECTS

Face Recognizer and Autonomous Mapper Robot *Summer 2019*
Institute Technical Summer Project - 2019

- Developed a robot on Raspberry Pi 3B+ with a facial recognition subroutine based on the LBPH algorithm using OpenCV in python and a mapper using distances from HC-SR04 sensors
- Programmed point-to-point shortest-path movements using the Wavefront Propagation Algorithm

Semantic Segmentation for Road Detection *Summer 2020*
Self Project

- Implemented three solutions for segmentation using the paradigm of Fully Convolutional Networks
- Used VGG-16 as an encoder and KITTI Road Dataset to train the decoder using Transfer Learning

Teaching Assistants' Selection Portal *June 2019 - January 2020*
Undergraduate Academic Council

- Worked as a Full-stack developer on the team of UGAC that created the Teaching Assistant's portal
- Designed the Front-End using HTML, CSS, javascript and bootstrap with datatables, a backend with a MySQL database using django, and a separate login app using REST principles to login via the institute's SSO

Copy on Write fork *October 2020*
Course Project - Operating Systems

- Implemented a Copy on Write version of the fork() system call in the XV6 Operating System
- Developed other System calls like the total number of free physical pages, the number of virtual and physical pages in the user-space of program and the number of pages occupied by the page tables

TECHNICAL STRENGTHS

Computer Languages	Proficient in C++, Python, Matlab Familiar with Java, Prolog, VHDL
Libraries	Keras, Tensorflow, C++ STL, Numpy, Pandas, OpenCV
Web Development	Django, HTML, CSS, Javascript, REST, MySQL
Others	Git, NS3, Make, L ^A T _E X, AutoCAD, Autodesk Eagle

LEADERSHIP POSITIONS

Mentor, Institute Student Mentorship Program *July 2020 - Present*

- One of the 12 third-year students selected after rigorous rounds of interviews and peer-reviews
- Part of a 108-membered team to play a facilitative, supportive and developmental role for junior students

Mentor, Department Academic Mentorship Program *June 2020 - Present*

- Assisting 6 sophomores to make the best out of the academic opportunities as a part of the department