SUMANYU GHOSHAL

+91-9820003259 ⋄ sumanyu@cse.iitb.ac.in

EDUCATION

Indian Institute of Technology Bombay *July 2018 - Present*
B.Tech. in Computer Science & Engineering (9.47/10)

ACADEMIC ACHIEVEMENTS

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

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 recogntion 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 -*
Undergraduate Academic Council *January 2020*
· 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

Other Course Projects
· **Splitwise Clone:** Developed a django app automate the addition and splitting of bills and provide insights
· **Memory Management:** Developed an efficient C++ program to simulate memory management
· **Dead-End Roads:** Designed an algorithm to determine the nodes to dead-end roads using the out-degree
· **Spanning Tree Protocol:** Designed a simulator for the Spanning Tree Protocol in bridge topology

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, LaTeX, 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 4 sophomores to make the best out of the academic opportunities as a part of the department

Team Member, Alumni Student Mentorship Program *April 2019 - April 2020*
· Selected as a part of a team of 6 to steer ahead Student-Alumni Relations Cell's Mentorship program
· Co-ordinated with a mentor pool of 300+ alumni and a mentee pool of 500+ students