Sahil Mondal

Los Angeles, CA | sahilmondal@gmail.com | (213) 663-4475 | https://www.linkedin.com/in/sahil-mondal

EDUCATION

University of Southern California, Los Angeles, USA   **August 2022–May 2024**
Master's of Science in Computer Science
Relevant Courses: Foundations of Artificial Intelligence, Web Technologies, Database Systems, Analysis of Algorithms

Dr. Vishwanath Karad MIT World Peace University, Pune, India   **July 2018–June 2022**
Bachelor of Technology in Computer Science and Engineering **(CGPA: 9.74/10.0)**
Relevant courses: Data Structures, Computer Networks, Operating Systems, Data Mining.

EXPERIENCE

USC Institute for Creative Technologies, LA, USA | Applied Research Intern   **May 2023–December 2023**
- Integrated **Segment Anything** and **Lama** models, driven by textual prompts, to build an **image inpainting system**.
- Optimized 3D terrain reconstruction with Neural radiance field (NeRF) manipulations adopting **Learned Perceptual Image Patch Similarity (LPIPS) loss**, generating **depth images** as geometric priors and **3D image inpainting** to yield **80% better results** than traditional NeRF models.
- Devised a training solution with enhanced terrain capture to offer a realistic geospatial foundation for the US Army.

Quidich Innovation Labs, Mumbai, India | Software Developer Intern   **February 2022–July 2022**
- Integrated **Yolov5, Fast R-CNN** with **Non-maximum suppression and Confluence** to model an accurate **real-time object tracking** system for cricket achieving **58 frames per second**.
- Attained a **98% accuracy** rate in real-time player **face recognition** by leveraging **Yolov5-face** model for face detection and **python face_recognition** library to extract facial encodings to match with encodings from test data.
- Collaborated with 2 interns to deploy the **dockerized** application for **20% more scalability** during prestigious cricket tournaments, including the World Cup 2021 and the Indian Premier League 2022. The live broadcast reached a viewership of **400 million** television viewers.

Canspirit Ai, Pune, India | Machine Learning Intern   **March 2021-June 2021**
- Led a team to create a **Flask web app** to extract crucial user info from PDFs using **text extraction** and **Named Entity Recognition models** obtaining an **94% overall accuracy** rate.
- Employed **Optical Character Recognition** tools like **Pytesseract, EasyOCR** with a **99% text extraction accuracy**, **UbiAi text annotation tool** for auto-labeling of custom entities and transformer language models **(BERT, ROBERTA)** to train on custom NER tags and respective tokens.
- Boosted a **25% increase** in company revenue following product launch, along with a case study.

TECHNICAL SKILLS

Languages: Python, R, C, C++, Java, Flutter, SQL, HTML/CSS, Javascript, PERL
Frameworks & Technologies: Tensorflow, Pytorch, OpenCV, React Js, Node Js, Flask, MySQL, MongoDB
Cloud Platforms: Google Cloud Platform (GCP), Amazon Web Services(AWS)
Developer Tools: Git, MATLAB, Postman, Tableau, Power BI, ArcGIS, Excel, Docker

PUBLICATIONS

Skin Lesion Classification using Deep Learning and Image Processing (Electronic ISBN: 978-1-7281-7089-3)
- Presented and published a paper on Skin Lesion Classification using Deep Learning and Image Processing at 3rd IEEE International Conference on Intelligent Sustainable Systems (ICISS), 2020.

PROJECTS

Counter COVID-19 Solutions
- Designed a system incorporating two integral features for corporations to aid COVID-19 prevention norms.
- Implemented Mobilenetv2 for face mask detection, Yolov3 model with a metric of Euclidean Distance to monitor social distancing.

Yelp Business Fetch Website
- Developed both a website and an android app utilizing React, Java and Xml, supported by a NodeJS backend to process and query data about details of businesses in the United States fetched via the Yelp Api and finally deployed the website to Google Cloud Platform.
- Combined user-friendly features such as input autocomplete, table display of businesses, business card with details, Google Map integration, past business reviews, and a reservation form module.

HONORS AND AWARDS

- Secured top 1 percentile in National Engineering Olympiad (April 2020) amongst 75000 students.
- Achieved top 2 percentile score out of 4500 applicants in course of 'Python for Data Science' offered by NPTEL.