Sahil Mondal

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EDUCATION

University of Southern California, Los Angeles, USA   **August 2022–May 2024**
Master's of Science in Computer Science **(GPA: 3.57/4.0)**

Dr. Vishwanath Karad MIT World Peace University, Pune, India   **July 2018–June 2022**
Bachelor of Technology in Computer Science and Engineering **(GPA: 9.74/10.0)**

TECHNICAL SKILLS

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

WORK EXPERIENCE

Verveware   **June 2024–Present**
Software Developer Intern | React Js, Node Js, MonogoDB, AWS, React Native, Redux   Los Angeles, USA
- Collaborate within a dynamic Agile team environment to innovate software solutions for the home care industry, benefiting over **5000 users** through the development of a comprehensive web app and mobile app.
- Conduct a thorough analysis of current software systems, identifying scalability bottlenecks and implementing solutions that enabled a **20% increase in system efficiency** and a **50% reduction in software bugs.**

USC Institute for Creative Technologies   **May 2023–December 2023**
Computer Vision Intern | Python, Pytorch, Nerf Studio, Git, Linux   Los Angeles, USA
- Integrated **Segment Anything** and **Lama** models, driven by textual prompts, to build an **image inpainting system**.
- Researched and applied various **Neural Radiance Field (NeRF)** manipulation techniques, incorporating advanced computer vision algorithms to optimize 3D terrain reconstruction with a **80% improvement in rendered results** compared to conventional 3D reconstruction methods while also achieving a **20% faster rendering speed**.
- **Tested** the rendered results on a 3D mesh capturing the terrain details, tailored specifically for US Army training needs, serving as a simulation environment.

Quidich Innovation Labs   **February 2022–July 2022**
Software Developer Intern | Python, Flask, Docker, MongoDB, OpenCV   Mumbai, India
- Utilized **Yolov5 and Fast R-CNN** for player detection to model a **real-time object tracking** system for cricket, enhancing **tracking stability by 30%** and maintaining a consistent frame rate of **50-60 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 reduce detection errors by 15%.**
- Automated manual player annotations through a script, **reducing manual labor by 60%.** Collaborated with 2 interns to deploy the system in a **Docker** container and maintain it to reduce post-deployment **maintenance errors by 10%**.

Canspirit Ai   **March 2021-June 2021**
Machine Learning Intern | Python, Flask, NER, OCR, Docker, Tensorflow, Pytorch   Pune, India
- Spearheaded a team to develop a PDF extraction tool using **OCR tools like PyTesseract, EasyOCR** and **NER models** achieving a **98% text extraction accuracy** to **reduce manual data entry time by 30%**.
- Fine-tuned transformer models like **BERT and RoBERTa** to predict **custom NER tags** for **7+ categories** annotated with **UbiAi** tool which **reduced inference time by 40%** and achieved an **accuracy of 90%**.
- Boosted a **20% increase** in **company revenue** following the launch of the tool as a **Flask web app** deployed in a **Docker** container, supported by a case study showcasing a **15% rise in customer interest**.

PROJECTS

Yelp Business Fetch Website | React Js, Node Js, Java, XML, Bootstrap, HTML/CSS, Javascript, JSON, GCP
- Developed a fully responsive website, fetching business details in the United States via the Yelp API and deployed it on Google Cloud Platform (GCP). Created an Android app with similar features using Java and XML.
- Pioneered 5+ user-friendly features such as input autocomplete, tabular display of businesses, business card with details and Google Map integration.

MERN-Stack-Notebook-App | React Js, Node Js, Mongodb, Javascript
- Engineered a full stack MERN application for a Personal Notes Creation Web App, enabling users to create, edit, and securely store personal notes with authenticated user accounts.