SANDESH SHRESTHA

San Francisco, CA (Open to Remote/Relocation) | (510) 364-2503 |sandeshshrestha02@gmail.com| Github:github.com/sbsx
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TECHNICAL SKILLS

Languages | Python, C/C++, Java, Javascript, R, SQL
Packages | Tensorflow, PyTorch, OpenCV, Pandas, Matplotlib, React/Express
Developer Tools | Docker, Git, npm, AWS, Agile Methodology, AutoDesk, Bash

SOFTWARE ENGINEERING EXPERIENCE

Software Engineering Consultant | Bluestamp Engineering **Jan 2023 - Present**

Machine Learning Pose Estimation App Development Python | Tensorflow | OpenCV | Web Scraping

- **App development of Tensorflow Keras ML** pipeline with human pose estimation and classification model

Aircraft Computer Vision Developer | Triton Unmanned Aircraft Systems **Oct 2020 - June 2022**

Developing SUAS international podium placing drone surveilance software Python | PyTorch | OpenCV | Bash | Nvidia Jetson

- Built and trained **convolutional neural network** to identify objects of interest and implemented **localization algorithms** for retrieving coordinates from live imagery
- Improved accuracy and speed of classification through CNN restructuring and **hyperparamater tuning**
- Developed **aerial surveying stitching** software, creating a high definition map of the airfield

Machine Learning Developer | Association for Computing Machinery San Diego **Oct 2020 - June 2022**

ML paradigm study of NBA pro players Python | Tensorflow | Pandas | Web Scraping

- Compiled 4 ML models to maximize performance in accuracy with feature engineering **one hot encoding**
- Trained using dataset of 2000 Stephen Curry shots from 2014-2015 NBA season to predict points

Robot Control Engineer | Triton Robotics **Oct 2020 - June 2021**

DJI Robomaster ShenZhen Competition Development C++ | ROS2 | Bash | VMWare | OpenCV

- Developed **pattern matching** software to track opponent's moving armor modules
- Increased low light performance with **Canny edge detection with OpenCV**
- Live optical tracking enabled weapon aiming with armor **position prediction** during competition

DEVELOPMENT PROJECTS

Machine Learning Engineer | Skin Cancer Detection **2022**

KNN model with PCA implementation Python | Jupyter | Matplotlib | OpenCV | Pandas

- **Preprocessed dataset** of 10000 high definition skin cancer images with OpenCV
- Built **KNN** from scratch and trained model to classify 7 different lesion types
- Implemented **PCA dimensionality reduction** and determined most optimal principal components

Data Analyst | Wage Gap Study **2022**

Data collection, cleaning, and analysis of congressional data Python | Jupyter | Statsmodel | Pandas | Numpy

- Performed **statistical analysis** on 435 congressional district observations
- Cleaned and merged data from multiple sources using **Pandas**
- **Fit regressions** to conclude correlation of wage gap with higher education rates and party affiliation

Computer Vision Engineer | Google Cloud OCR **2020**

Cloud hosted character recognition advanced calculator Python | OpenCV | Google Cloud | Tensorflow

- Retrained Google's highly accurate **OCR CNN model** to identify mathematical symbols
- Interfaced with **Wolfram Alpha API** to solve handwritten advanced calculus problems, placed top 10 in SF Hackathon

EDUCATION

University of California, San Diego - Bachelors of Science,**Mathematics - Computer Science** 2022