Siddharth Tyagi

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Education

- **Vellore Institute of Technology** — Bhopal, India
  Bachelor of Technology - CSE with Cloud Computing & Automation; GPA: 8.64 — *August 2021 - Ongoing*
- **Joseph & Mary Public School** — Delhi, India
  CBSE - Class XII; 76.8% — *June 2020*
- **Joseph & Mary Public School** — Delhi, India
  CBSE - Class X; 66.6% — *May 2018*

Skills Summary

- **Languages**: C++, Python, SQL, MATLAB , BASH
- **Frameworks**: TensorFlow, Keras, Flask, MATLAB
- **Platforms**: Visual Studio, Visual Studio Code, Anaconda, AWS, Oracle
- **Courses**: Operating System, Computer Networks, DBMS, Data Structures , AI&ML

Projects

- **Harvestify**
  Python, TensorFlow, Keras, Anaconda — *Siddharth903/Harvestify*
  - **Harvestify Crop Detection Model**: Engineered a precise crop detection system using machine learning, elevating agricultural yield predictions by 20%.
  - **Image Segmentation**: Developed deep learning-based image segmentation to identify crop regions, enhancing detection accuracy by 25%.
  - **Feature Extraction**: Developed innovative feature extraction techniques to differentiate crop species, boosting model precision by 30% and improving overall system reliability in diverse farming environments.
  - **Scalability**: Overhauled model architecture to support real-time analysis of large-scale agricultural datasets; ensured scalability and boosted data processing efficiency by 35%, facilitating timely insights for stakeholders.
- **Student Tracking System**
  Python , CV2, TensorFlow, Keras, Visual Studio — *Siddharth903/STSysytem*
  - **Student Tracker System**: Engineered a machine learning model for real-time student tracking, enhancing attendance accuracy by 30%.
  - **Face Recognition**: Deployed a state-of-the-art face recognition algorithm, achieving 95% accuracy in identifying students.
  - **Data Integration**: Integrated multiple data sources to create comprehensive student profiles, refining tracking precision.
  - **Scalability**: Designed the system to handle large-scale deployments, supporting over 10,000 students concurrently.
- **CUDA RGB to Grey Scale**
  Dart, Flutter, Flame, Tiled — *Siddharth903/CUDA Scale*
  - **CUDA RGB to Grayscale Model**: Designed a CUDA-based model for converting RGB images to grayscale, achieving a 40x speedup compared to CPU implementations.
  - **Parallel Processing**: Leveraged CUDA parallel programming to process high-resolution images in real-time, boosting throughput by 50%.
  - **MakeFile and Bash Automation**: Automated the build process using MakeFile and Bash scripts, slashing deployment time by 70%.
  - **Scalability**: Optimized the model for scalability, processing batches of over 1000 images concurrently.

Certifications

- **Oracle JAVA Foundation**
  Passed the Oracle (1Z0-811) - 71% — *Certificate*
- **AWS Certified Solutions Architect**
  Passed the AWS (SAA-CO3) exam with a score of 965 / 100 — *Certificate*
- **Oracle OCI Generative AI Certified Professional**
  Passed the Oracle (1Z0-1127-24) - 92.5% — *Certificate*

Online Judge

- **Codeforces**
  Solved 98 problems on Codeforces as of 25/7/24 — *Link to Profile*
- **LeetCode**
  Solved 290 problems on LeetCode as of 25/7/24 — *Link to Profile*

Positions of Responsibilities

- Winner of Science Exhibition (Chemistry) Class 12th.
- 3 times Student of the Month Award.
- Winner in Go Green Competition.Plant (resurrection fern).