

SIDDHARTH SAINI

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| Academic Details | | | |
|------------------|---|---|--------|
| Year | Degree | Institute | CGPA/% |
| 2023 | Bachelors of Technology (Computer Science & Engineering) | Indian Institute Of Information Technology, Raichur <i>Mentored by IIT Hyderabad</i> | 9 |
| 2018 | XII (CBSE) | S. D. Vidya Mandir, Panipat, Haryana | 95.4% |
| 2016 | X (CBSE) | S. D. Vidya Mandir, Panipat, Haryana | 10 |

Work Experience

- Machine Learning Intern at CKM VIGIL Pvt. Ltd.** [May 2021 - Present]
 - Researched and improved upon the **state-of-the-art** Object Detection Model - **EfficientDet** for the Semiconductor Wafer Defect Detection Problem with **mAP@0.5 : 0.834** on the dataset containing 38k mixed type defects for commercial large scale deployment.
 - Added **Dilation** to the **BiFPN** Feature Network to improve the performance and introduced **Wafer-Det Architecture**.
 - Used **INT8 Quantization** and reduced the model size to **¼ times** allowing wide hardware support with high efficiency.
 - Worked with the team to implement other state-of-the-art Semantic Segmentation models - YOLOv5, UNet.
 - Working on the publication for the above research work and proposed architectures.

Projects

- Node Classification using Graph Convolution Network : Amazon ML Challenge** [Jul'21]
 - Used the Graph Convolution Network to solve the problem of classifying the Browse Node ID of Products in the Amazon Dataset consisting of 3M products.
 - Obtained an accuracy of 96% on the initial 10k products.
- Flutter App: Locating Nearby Healthcare Centres (Sup: Dr. M V Panduranga, Associate Professor, CSE, IIT Hyderabad)** [Sep'20]
 - Developed a flutter app which allows a user to locate nearby healthcare and wellness centres, which are opened under the Aayushmaan Bharat Yojna, India.
 - Tools: **Flutter**, **Dart** and **Google Maps API**.
- Designing Programming Language : DevaN (Sup: Dr. Ramakrishna Upadrasta, Asst. Professor, CSE, IIT Hyderabad)** [Oct'20]
 - Designed a first-of-its-kind programming language from scratch which is implemented in Hindi script
 - The language is based on the imperative paradigm which includes both procedural and OOP.
- Warehouse Management System (Sup: Dr. M V Panduranga, Associate Professor, CSE, IIT Hyderabad)** [Nov'20]
 - JAVA** project to manage a huge quantity of stocks and products and keeping a record of all the products with their cost, stock, and transactions along with the records of all the Customers, Suppliers etc.
 - Build the database using **MySQL** on a local host server.

Skills

- Languages:** C, C++, Python, SQL
- Tools:** Git, LaTeX, LINUX
- Frameworks & Libraries:** Tensorflow, PyTorch, Turicreate, Matplotlib, Pandas, Numpy, OpenCV, Labelme
- Creative Tools:** Final Cut Pro, Adobe Premiere Pro, Adobe After Effects, Adobe Photoshop

Relevant Courses

- Data Science:** Introduction to AI and ML, Machine Learning - Regression, Classification, Clustering, Recommender Systems, Deep Learning & Neural Networks
- Computer Science:** Data Structures, Algorithms, Computer Architecture, Operating Systems, Database Management System, Theory Of Computation, Complexity Theory, Principles Of Programming Languages (Basics)

Positions Of Responsibility

- Multimedia Coordinator** : Elan & nVision, Annual Techno - Cultural Fest, IIT Hyderabad [Oct'20 - Jul'21]
- Design Manager** : E-Cell, IIT Hyderabad [Sep'20 - May'21]
- General Secretary (Elected)** : Students' Gymkhana, IIIT Raichur [Jul'20 - May'21]
- Head Boy (Elected)** : Students' Council, S. D. Vidya Mandir [2017 - 2018]

Scholastic Achievements

- 2nd Prize** for “**State-of-the-art Multi-class Wafer Defect Detection & Segmentation in Semiconductor Manufacturing**” - Innovation in Manufacturing Processes 2021 & NatFoE 2021 by INAE [July 2021]
- Best Performer in Academics**, CSE Department, IIIT Raichur [2019 - 2020]
- Ranked in **Top 2%** among 1.2 Million Students in Joint Entrance Examination [2019]