# SIDDHARTHA GAIROLA

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## EDUCATION

**International Institute of Information Technology, Hyderabad**      *Hyderabad, India*
*Dual Degree BTech and MS by Research in CSE*      *2014 - 2019*
*Overall GPA:* **8.98 /10**

**St. Joseph's Academy**      *Dehradun, India*
*Senior Secondary, ISC; Average:* **93.6%**      *2012 - 2013*
*Secondary, ICSE; Average:* **95.28%**      *2010 - 2011*

## WORK EXPERIENCE

**Adobe Inc.**      June 2019 - present
*Research Intern*

· Working as a Research Intern in the **Media and Data Science Research Team** with Balaji K.
· Implemented a Deep Learning model in *Python, Pytorch* to perform **Few shot Guided Segmentation** on images.

**IIIT Hyderabad**      May 2016 - May 2019
*Research Assistant*

· Honours at Center for Visual Information and Technology.
· Worked with Prof. P.J. Narayanan in Computer Vision, Machine Learning and Deep Learning.

**IIIT Hyderabad**      August 2016 - May 2019
*Teaching Assistant*

· Teaching Assistant for the following courses - *Digital Logic and Processors, Artificial Intelligence, Digital Image Processing, Computer Vision and Graphics.*
· The duties involved taking regular tutorials, setting up questions for assignments and conducting evaluations.

**Google Summer of Code**      May 2017 - Aug 2017
*Student Software Developer*

· Got accepted as a developer for Google Summer of Code Program 2017 for the organization Scilab.
· Implemented a *C/C++* wrapper for Matlab MEX-API on current API Scilab.

**Google Summer of Code**      May 2018 - Aug 2018
*Student Software Developer*

· Got accepted as a developer for Google Summer of Code Program 2018 for a 2nd time, organization Scilab.
· Implemented a DEMO in *C/C++ and Scilab* as a working example for the MEX Library in Scilab.

## PUBLICATIONS

V Kumar, D Khattar, **S Gairola** , Y Kumar Lal, V Varma (2018), "Identifying Clickbait: A Multi-Strategy Approach Using Neural Networks", **The 41st International ACM SIGIR Conference on Research & Development in Information Retrieval**, Pages 1225-1228.

S Rawat, **S Gairola**, R Shah, PJ Narayanan (2018), "Find Me a Sky: A Data-Driven Method for Color-Consistent Sky Search and Replacement", **International Conference on Multimedia Modeling**, Pages 216-228.

**S Gairola**, R Shah, PJ Narayanan (2019), "Unsupervised Image Style Embeddings for Retrieval and Recognition Tasks", **Winter Conference on Applications of Computer Vision** *(WACV '20)*. (Submitted; this work is currently under review)

## ACADEMIC ACHIEVEMENTS

**Awarded the Dean's List Award** for 6 semesters straight for being in top 10% of the class in Monsoon 2015, Monsoon 2016, Monsoon 2017, Spring 2016, Spring 2017 & Spring 2018.

Was a member of the teams **Pendulum** and **GOAT** which qualified for the **ACM ICPC Asia Amritapuri Onsite Regionals** in 2015 and 2016 respectively.

**All India Rank 2262** in **JEE Advanced 2014** (Among 150,000 students who appeared for the exam).

**All India Rank 3856** in **JEE Mains 2014** (Among 1.2 million students who appeared for the exam).

## TECHNICAL SKILLS

| | |
|---|---|
| **Working Knowledge** | GNU/Linux, Bash, C/C++(STL), Python, Matlab, Octave, OpenCV |
| **Software & Tools** | HTML, CSS, JS, LaTeX, Excel |
| **Deep Learning Frameworks** | PyTorch, TensorFlow, Keras, Caffe |
| **Past Experience** | Java, OpenGL, WebGL, Django, Web2py |

## PROJECTS

**Hostel Portal:** Developed a hostel management portal using python, Web2py framework. *Spring 2015*

**Linux C-Shell:** A linux like terminal implemented using *C* language using different concepts like fork, signals, exec, piping. *Monsoon 2015*

**P2P File Sharing:** Developed an application layer file transfer protocol with support for TCP. It included features such as file upload, file download and indexed searching. (Computer Networks course) *Spring 2016*

**AI Bot:** Designed an automated agent bot to play the a modified version of Tic-Tac-Toe game. Using a minimax algorithm and alpha-beta pruning. *Spring 2016*

**2D Game:** A 2-dimensional shooting game developed using *OpenGl C++*. *Spring 2016*

**3D Game:** A 3-dimensional game developed using *OpenGl C++*(GLFW library). *Spring 2016*

**High Dynamic Range Images:** HDR imaging - generating images with a greater range of luminance levels than which can be achieved by taking only a single photograph with a fixed exposure. Using tone mapping, high-boost filtering and bilateral filtering for improvements. *Monsoon 2016*

**Wiki-Search Engine:** Implementation of an efficient and scalable search engine on Wikipedia dump in *Python*. Retrieve top relevant documents based on input query. Handled field as well as phrase queries. Documents were re-ranked based on tf-idf measure. For fast retrieval used threading and multi-level indexing. *Monsoon 2017*

## PROGRAMMING AND OPEN-SOURCE

**Programming:** Take part actively in competitive programming contests.

**Codechef** (handle: sidgairo18)

**Codeforces** (handle: sidgairo18)

**Open-Source:** Contribute to open source actively. Have made contributions to open source organizations like **Scilab, LibreOffice and CCExtractor**. (**Github profile** : sidgairo18)

## ADVANCED COURSES

| **Core Courses** | **Other Courses** |
|---|---|
| Computer Programming | Linear Algebra |
| Data Structures | Discrete Mathematics |
| Algorithms | Complexity and Advanced Algorithms |
| Operating Systems | Computer System & Organization |
| Database Systems | Digital Image Processing |
| Artificial Intelligence | Computer Vision |
| Machine Learning | Information Security |
| Advanced Computer Networks | Systems Network Security |
| Information Retrieval & Extraction | Natural Language Applications |