

Sachin Chandani

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Education

2016 - **Bachelors of Technology - Electronics and Communication.**
Present International Institute Of Information Technology(IIIT), Hyderabad

Work Experience

Summer 2019 **Summer Intern, GOLDMAN SACHS PVT. LTD.**
- Worked on development of greedy/dynamic/linear programming based solutions to generate funding trade proposals with minimized cost.
- Parallelized the existing processes using threading and divide & conquer, and produced the results 18 times faster than previous methods.
- Developed & deployed an interactive web application to visualize large financial data sets efficiently.
- Technologies used: NoSQL, MySQL, JavaScript, Slang, Linear Optimizations, Distributed Systems.

Monsoon 2017 **Algorithmic Problem Setter, BUZZ'17 CODECRAFT, IIIT-HYDERABAD, .**
- Successfully created and tested original algorithmic problems in the annual programming competition organized by IIIT-Hyderabad.

Achievements

Competitive Programming **Programming Contests.**
Codechef's Monthly Programming Contests: **One top-10 and two top-25 finishes(Global)**
Amodocs Hackfest Hackathon 2019 Online Round: **10th place [8000+ participants]**
Annual Programming Competition, IEM-Calcutta: **12th place [7000+ participants]**
Annual Programming Competition, IIIT-Allahabad: **59th place, qualified for onsite [3500+ participants]**
Google Kickstart: **336th place in 2018 round-F and 362nd place in 2019 round-E(Global)**
Codechef's Snackdown 2017: **244th place(Global)**

Programming Profiles.
Codechef: [blue_legend](#), Max Rating: 1965(Purple)
Codeforces: [Heisenberg](#), Max Rating: 1667(Expert)

ACM - ICPC **Online Round.**
2018 - Member of team **TooManyBugs** which secured **overall 445th position** in ACM - ICPC 2018.

JEE 2016 **Joint Entrance Exam 2016.**
- 99.35 Percentile in JEE Mains 2016.
- 5936 All India Rank in JEE Advanced 2016.

Projects

Web Reader **Web Reader Platform(Ongoing Project).**
A foreign language web reader to display Sanskrit in alternate scripts, word stems, morphological and lexical identification, translation, and notes.
Java, Perl, NLP, Node.js.

CamScanner **Automated Document Cropping.**
CamScanner like automated document detection and cropping over a plane background.
Node.js, Python, OpenCV, HTML, CSS.

Linux Shell **Linux C Shell.**

A linux like shell developed purely in C with all command sets and piping features implemented and tested.
System calls, C.

WordCloud **Twitter Sentiment Analysis.**

Sentiment analysis of latest tweets to create a heat-map using developer keys and NLP libraries.
NLP, Python, JavaScript, HTML, CSS.

Heart Rate **Heart Rate Monitoring Using PPG Signals.**

Monitoring Uses PPG, ECG and Acceleration Signals to monitor heart rate with Signal Decomposition, Spectrum Peak Tracking and Sparse Signal Reconstruction.
MATLAB, Python, Bash.

Shape **3-Dimentional Shape Plotting.**

Plotting Shape Plotting System which can plot 3 dimensional view of any object in x-y-z Cartesian system.
The output can be used to for development purpose i.e. input to a 3D printer.
C(embedded), Bash, Micro-controllers(Arduino UNO) , Circuit Designs.

Bomberman **Bomberman Terminal Game.**

UNIX terminal game based on original BOMBERMAN, purely developed in python without using any external libraries and having multiple difficulty levels.

Swarm **Variation Resistant Sizing Of MOSFET Transistor Circuits.**

Intelligence Transistor sizing for digital circuits which uses Artificial Swarm Intelligence/Ant Colony Optimization.
The leakage of 45nm MGK full adder was reduced to 50% during testing.
Artificial Intelligence, C++, Python, HSPICE.

Relevant Coursework

Computer Science & Mathematics	Data Structures and Algorithms, Computer System Architecture, Cache Management & Memory Hierarchy, IT Workshop(1 & 2), Time Complexity Analysis, Graph Theory, Linear Algebra, Probability and Random Processes, Discrete Maths, Group Theory, Vector Spaces.
Electronics	Signals and Systems, Digital Signal Processing, Embedded Hardware Designs, Digital Logic and Processors, Electronic Workshop(1 & 2), Linear Electronic Circuits.
Miscellaneous	Atom models, Schrodinger eqn, Lagrangian/Hamilton Mechanics, Random Walks, Diffusion, Heat, Engineering Systems, Humanities.

Technical Skills

OS	Linux, macOS, Windows
Programming and Scripting	C, C(embedded), C++(STL), Java, Python, Bash, Assembly, Ruby(Basic), Go(Basic).
Web	HTML5, CSS3, Node.js, React, Flask, MySQL, NoSQL Bootstrap.
Miscellaneous	Git, Shell, Unity 3D, OpenCV(Basic), L ^A T _E X, MATLAB, VLSI Designs

Positions Of Responsibility

Apex Body Member, IIIT-Hyderabad	<i>March 2018 - Present</i>
Coordinator, Campus Life Committee, IIIT-Hyderabad	<i>May 2018 - June 2019</i>
Cultural Coordinator, VAYU House, IIIT-Hyderabad	<i>June 2018 - April 2019</i>
Overall Head, Marketing Team, Felicity IIIT-Hyderabad	<i>September 2018 - January 2019</i>
Student Mentor, IIIT Hyderabad	<i>June 2017 - March 2018</i>
Logistics Manager, VAYU House, IIIT-Hyderabad	<i>June 2017 - March 2018</i>