Sachin Chandani

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Education

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

Work Experience

Summer 2019	**Summer Analyst**, Goldman Sachs Pvt. Ltd. -Worked on development of greedy/dynamic/linear programming based solutions to reduce the inefficiency of synthetic swaps and minimize firm's cost. -Developed & deployed a web platform to efficiently query and visualize the data from an indexed data lake using logarithmic data structures. -Improved the query time of SQL queries by dynamic programming & caching the data stats.
Monsoon 2018	**Web Administrator**, Query Forum - IIIT Hyderabad, . -Maintained frontend, backend and server of an interactive website for the freshers' to get clarifications for their queries
Summer 2018	**Full Stack Developer**, Merak.AI . -Digitization of menu cards for food delivery companies using machine learning algorithms. -Dashboard development for state-of-art machine learning products.

Achievements

ACM - ICPC 2018	**Online Round**. -Member of team **TooManyBugs** which secured 445th position overall and 283rd position in Amritapuri region in ACM - ICPC 2018.
Competitive Programming	**Programming Contests**. -Placed 10th in the Amdocs Hackfest Hackathon 2019 online round among 8000+ participants. -Placed 12th in the annual programming competition organised by IEM, Calcutta with 7000+ participants. -336th rank in Google Kickstart'18 Round-F. -Placed 59th in online round & qualified for on-site round of IIIT-Allahabad's annual programming competition - CodeRed. -25th position all over the globe and 13th position in India in Codechef's monthly programming contest(August Lunchtime'18). -244th position in the pre-elimination round of Codechef's Snackdown'17. Team: 'blue_legend' **Programming Profile**. Codechef: blue_legend, Max Rating: 1965(Purple) Codeforces: Heisenberg, Max Rating: 1667(Expert)
Problem Setting	**Felicity Buzz - IIIT Hyderabad Codecraft**. Successfully curated and tested algorithmic problems in the annual programming competition organized by IIIT-Hyderabad.
JEE 2016	**Joint Entrance Exam 2016**. -99.35 Percentile in JEE Mains 2016. -5936 All India Rank in JEE Advanced 2016.

Projects

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

Heart Rate Monitoring	**Heart Rate Monitoring Using PPG Signals**. Uses PPG, ECG and Acceleration Signals to monitor heart rate with Signal Decomposition, Spectrum Peak Tracking and Sparse Signal Reconstruction. MATLAB, Python, Bash.
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.
Shape Plotting	**Shape Plotting Of The Objects**. 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.
WordCloud	**Sentiment Analysis**. Sentiment analysis of latest tweets to create a heat-map using developer keys and NLP libraries. NLP, Python, JavaScript, HTML, CSS.
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 Intelligence	**Variation Resistant Sizing Of MOSFET Transistor Circuits**. 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.
Obstacle Avoiding Bot	**Obstacle Avoiding Bot Prototype**. A bot prototype which avoids obstacles in it's path and changes it according to the requirements. Arduino, C(embedded), Circuit Designs.

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(Basic), Ruby(Basic), Go(Basic), Python, Bash, Assembly.
Web	HTML5, CSS3, Node.js, Bootstrap.
Miscellaneous	Git, Shell, OpenCV(Basic), LaTeX, Matlab, VLSI Designs

Positions Of Responsibility

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