Rahul **Anand**

COMPUTER ENGINEEING MAJOR · THAPAR UNIVERSITY

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Skills

Languages	C++/C · JavaScript · Python · HTML/CSS · SQL · LaTeX
Frameworks	Node.js · Express.js · jQuery · Bootstrap · Socket.IO · MongoDB
Toolkit	Git · Vim · Docker · Kubernetes · Bash · VSCode
Interests	Infrastructure Engineering · Backend Engineering · Distributed Systems

Projects

PathAlgo

PATHFINDING ALGORITHMS VISUALIZATION   *Jul. 2019 - Present*

- Developed a pathfinding algorithms visualizer using plain vanilla JavaScript.
- Supports algorithms like A*(A-star), Breadth-First-Search, Depth-First-Search, Greedy for pathfinding to reach the target.
- Implemented Prim's, Eller, Wilson and Kruskal's algorithms for maze generation.

LetsWatch

YOUTUBE VIDEOS SYNCHRONIZATION   *Apr. 2019 - Jun. 2019*

- Built a web app for watching YouTube videos in Synchronization with any number of people using Node.JS.
- Implemented functionalities like changing url, private rooms and chat window etc.
- Used Socket.IO for web socket communication, YouTube API for player control and Heroku for hosting.

Shorttty

URL SHORTENER   *Jan. 2019 - Mar. 2019*

- Used Node.JS and Express.JS to create an open source URL shortener app like tinyurl.
- Implemented RESTful APIs to expose functionalities like create, delete URLs/API developer keys etc.
- Used nanoid for 128-bit hash value generation, MongoDB for database and Heroku for hosting.

Opticalflow

OPTICAL FLOW ANALYSIS   *Oct 2018 - Dec. 2018*

- Used optical flow analysis and OpenCV to convert video into motion paths.
- Working with various frames per second of the same sample video.
- Implemented Farneback and Lucas Kanade optical flow algorithms for conversion in C++.

Education

Thapar University   *Punjab, India*

B.E. IN COMPUTER ENGINEERING   *Aug. 2018 - Present*

- Cummulative Grade Points Average (2 semesters): 7.0/10
- Expected Graducation: April 2022

Apeejay School   *Punjab, India*

PHYSICS, CHEMISTRY, MATHS, COMPUTER SCIENCE   *Aug. 2016 - Aug. 2018*

- 12th Grade Percentile (CBSE): 83.4%
- 10th Grade Cummulative Grade Points Average (CBSE): 9.8/10

Honors & Awards

INTERNATIONAL

2016	**Honorable Mention**, NASA Ames Space Settlement Design Contest	*California, U.S.A*
2015	**Honorable Mention**, NASA Ames Space Settlement Design Contest	*California, U.S.A*

DOMESTIC

2018	**Top 2 %** , Joint Entrance Examination Mains (Taken by 1.5 million candidates)	*India*