Kartikey **Tewari**

COMPUTER SCIENCE AND ENGINEERING STUDENT

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Education

National Institute of Technology   *Himachal Pradesh, India*

B.TECH AND M.TECH IN COMPUTER SCIENCE AND ENGINEERING (77.8%)   *Aug 2017 - May 2022*

- DS, Algorithms, Computer Architecture, Discrete Mathematics, Statistics, Theory of Computation, Advanced Database Management System.
- Completed many courses on Udemy including Web Development Bootcamp, Arcade Game in Javascript, Introduction to Shell Scripting.

Delhi Public School, Vidyut Nagar   *Uttar Pradesh, India*

INTERMEDIATE EXAMINATION (92.8%)   *March 2015 - March 2017*

- Received Meritorious student award for securing cent-percent marks in Mathematics All-India Examination.
- Received NTSE Scholarship from Government of India, awarded to meritorious students.

Work Experience

FAH, Ovali   *Gurgaon, India*

SDE INTERN   *August 2020 - Present*

- Deployed Docker containers.
- Wrote dynamic backend APIs with special focus on scalability.

NIT Hamirpur   *Himachal Pradesh, India*

RESEARCH INTERN   *May 2020 - July 2020*

- Designed a tree based data structure and the algorithms to generate and perform queries on it. The tree can handle all types of transitive function while providing scalable solutions.
- Exponentially, reduced Time complexity for query operations while reducing space complexity by 25% for storing data.
- Implemented the code for proposed data structure as well as contemporary methods, such as brute force method and segment tree approach in C++.
- Designed a test suite to benchmark proposed algorithm with contemporary methods. Then wrote scripts to automate the process.
- Plotted the data in a graph, and found reasons of anomaly between theoretically expected results and practical data.
- Wrote a paper on the tree, and deployed the code using Git.

Personal Projects

Parallel Wavellet Tree   *Paper*

C++, BASH SCRIPT, OCTAVE, LATEX   *August 2020*

- Designed a test suite for benchmarking parallel and series implementation of wavelet tree.
- Plotted the data points, and explained the behavior of generated graphs.

Color Ninja Game   *UI/UX development*

HTML, CSS, JAVASCRIPT, BOOTSTRAP3   *June 2020*

- Designed a game for selecting the resultant color by mixing given value of Red, Green and Blue.

Arcade Game   *AI-Gaming Engine*

HTML, CSS, JAVASCRIPT, CANVASJS   *June 2020*

- Designed and implemented a unbeatable Artificial Intelligence based gaming engine in Javascript.
- Made a front-end of classic arcade game, powered by the in-house coded gaming engine.

Yelp Clone   *Web App*

HTML, CSS, JAVASCRIPT, NODEJS, EXPRESSJS, EJS, MONGODB, PASSPORTJS   *May 2020*

- Made a clone of yelp, as a website of reviews.
- Implemented user-authorization and back-end API, having full CRUD functionality.
- Wrote a RESTful API for communication with database.
- Deployed the code on Heroku using Git, while hosting back-end on MongoDB Atlas cluster.

Achievements

- Specialist at Codeforces with Rating of 1432.
- Four star at Codechef with Rating of 1815.
- Spotted bug in Microsoft Win10 Powertoys.
- Write a personal blog about tech and general topics with 4000 views, from 8 countries.
- Wrote a post about building latex on reddit, that trended on linux based sub-reddits.