Tejas Srivastava

tejas.srivastava@students.iiit.ac.in | 9336050380 | tejas591995@gmail.com

EDUCATION

IIIT HYDERABAD

B. Tech in Electronics and Communication Engineering (with Honors)
Nov. 2021 - Present
CGPA 9.27
(Dean's List in all Semesters)

ST. JOSEPH'S COLLEGE

June 2021 | Allahabad, U.P.
96.6% 12th with PCM and CS

CODING PROFILE

CODEFORCES

Profile : tejas2
Rating : **1302** (Max : 1416)
Among top **5 %** of the users
Ranked **548** in CF Round 799

CODECHEF

Profile : tejas2
Rating : **1550** (Max : 1725)
Ranked **81** in Oct. Challenge '21

LINKS

- Github: **MrTejas**
- LinkedIn: **Tejas Srivastava**
- StackExchange: **tejas2**
- Leetcode: **tejas_2**

COURSEWORK

Statistical Methods in AI
Computer Vision
Topics in Reinforcement Learning
Probability and Random Processes
Intro to Coding Theory
Linear Algebra
Entropy and Information
Real Analysis
Signal Processing
Data Structures and Algorithms
Computer Programming
Digital Image Processing
Intro to Processor Architecture
Networks, Signals and Systems

LANGUAGES

C • C++ • Python • JavaScript - ReactJS
HTML • CSS • bash • Matlab
MySql • Verilog • •NgSpice

EXPERIENCE

SOFTWARE ENGINEER INTERN | Qualcomm

May 2024 - July 2024 | Hyderabad

- Developed a **debugging tool** to analyze build crashes by processing disassembly files and extracting function call stacks, streamlining crash diagnostics for faster resolution. The tool significantly reduced debugging time and **improved developer productivity across multiple teams**.
- Designed and implemented an **advanced Program Counter data tracking system** to analyze function execution frequency; findings facilitated the **resolution of major performance bottlenecks** during build processes.

SPCRC, IIIT HYDERABAD | Honors

Signal Processing and Communications Research Lab
May 2023 - Present | IIITH, Hyderabad

- Conducting research and experimentation under **Dr. Lalitha Vadlamani** & **Dr. Gowtham Kurri** to develop **Dual-Discriminator GANs** with *tunable loss* enabling a novel and generalized GAN framework tailored for a wide range of applications.
- Developed interactive educational content for Probability, Random Processes in collaboration with Virtual Labs **(under the Ministry of Education)**. Prepared experiments, simulations, tests, and theory, leveraging web development skills to enhance accessibility and learning for lakhs of students across India.

PROJECTS

5G-NR LDPC-DECODER | Reinforcement Learning | Python

- Created a high-performance LDPC decoder using a **novel RL-based scheduling strategy**. Applied **Deep Q-Learning** to optimize decoding, surpassing traditional 5G NR LDPC layered scheduling in speed and accuracy, while enhancing overall efficiency.

ML-ALGOS | ML | PYTHON

- A Python library implementing **core ML algorithms** (*KNN*, *Decision Trees*, *Logistic Regression*, *MLPs*) and **RL methods** (*DQN*, *DDPG*, *Q-learning*, *Policy Iteration*) from scratch using OOP. Optimized performance with vectorized computations for scalability and efficiency

CV-SANDBOX | Computer Vision | Pytorch

- Developed a library of algorithms for major CV tasks including *Camera Caliberation*, *Object Detection*, *Image Classification using SIFT-BoVW and CNNs*, *Semantic Segmentation and CLIP* using Pytorch. Tested on popular datasets and provides easy interface and detailed analysis.

CHATTER-BOX | React-JS | Firebase

- A React-JS chat application enabling **real-time messaging** and **file sharing** with a responsive, user-friendly UI. Leveraged Firebase for scalable data storage and secure authentication, implementing React concepts like Hooks, States, Props, and Context, along with SCSS for modern, maintainable design.

MYTOP | Linux | c

- Implemented a fully functional C-shell for Linux with a terminal-based 'Table of Processes' (top) program for **real-time system monitoring**. Utilized C for detailed resource tracking, including memory management, core-wise CPU utilization, process states, priorities, and battery status, applying **systems programming and performance optimization**