

Vidit Jain

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EDUCATION

International Institute of Information Technology, Hyderabad (IIIT Hyderabad)

India

BTech (Honors) in Computer Science & Engineering GPA: 9.63/10 (Major) 9.46/10 (Overall)

Graduation Date: May 2024

- Organizations/Awards: Honors Research Program, Dean's Honors List (x4), Merit List (x2), Programming Club Coordinator.
- Teaching Assistant for Design & Analysis of Algorithms, and Discrete Math.
- Coursework: Data Structures, Design & Analysis of Algorithms, Databases, Data Systems, Distributed Systems, Operating Systems, High Performance Computing, Advanced Algorithms, Game Theory, Machine Learning, Probability & Statistics, Linear Algebra.

WORK & LEADERSHIP EXPERIENCE

Capital One

Dallas, Texas

Software Engineer Intern

Jun 2023 - Aug 2023

- Automated the verification of rule changes for loans, implementing a cloud-based system with AWS & a Salesforce interface.
- Implemented an automated version history system for price structure rules, enabling Business Analysts to seamlessly keep track of changes, push and pull updates, while ensuring consistency of the updates made by 250+ analysts on 10k+ sets of rules simultaneously.
- Created a tool to quickly resolve out-of-order updates of the magnitude 1k-10k in the Version Control System, minimizing inconsistency.

Computer Systems Group (IIIT Hyderabad)

Hyderabad, India

Undergraduate Researcher

Jul 2022 - Present

- Working under guidance of Dr. Suresh Purini, in collaboration with Intel Labs to optimize an existing bioinformatics algorithm implementation's performance using vector intrinsics, instruction-level parallelism and other low-level optimizations.

IIIT Programming Club

Hyderabad, India

Club Coordinator

Jul 2022 - Sept 2023

- Conducting & authoring problems for global contests like Decode and CodeCraft, conducted on Codeforces with 20k+ participants. Organized Botomania, an event for developing a bot to win a non-deterministic 2-player game.
- Managed over 15 contests within college, and took meets covering Number Theory and advanced String algorithms.

MBT Infra

Hyderabad, India

Software Engineer Intern

Jan 2022 - May 2022

- Coded an Ethereum-network based application for insurance payouts using Flutter, secured with 2-Factor Authentication using Coinbase.
- Deployed a smart contract on the Ethereum Network & designed a system to purchase & payout insurance using crypto to 1k+ people.

ACHIEVEMENTS

- Codeforces ([fangahawk](#)) - 2113 (Master), top 1.5% Globally, top 75 in India.
- Google Kickstart 2022 - Rank [50](#)/12k (Round G) and [86](#)/5k (Round H).
- Google Hashcode - Rank [296](#)/10k teams globally, rank 21 in India.
- ICPC 2022 (Team [fightFight](#))
 - #10 in India-Wide Preliminary Round for Amrita Regional
 - #23 in Amrita Regional
 - #19 in Asia-West Continental Finals

PROJECTS

Optimizing Bioinformatics (C, C++, OpenMP, Google Benchmark Library) [Link](#)

Optimized the Needleman-Wunsch algorithm by modifying the recurrence relation processing method, optimally using the system cache, and utilizing instruction level parallelism to achieve a 130x speedup. This project was presented to Intel Labs.

Hybrid Distributed File System (GFS, HDFS, gRPC) [Link](#)

Built a Distributed File System with semantics similar to both Google File System and Hadoop File System, constructing a Consistent & Partition Tolerant Distributed System.

Database System Design (Databases, C++, Query & Storage Optimization, Indexing)

Extended the functionality of the RDBMS, implementing the efficient storage of matrices, with a specialized page design to improve efficiency of certain queries. I've implemented various database queries (joins, group by), and indexing with B+-Trees.

xv6 & C Shell (C, Linux, Operating Systems) [Link](#) [Link](#)

Implemented and benchmarked syscalls & 3 schedulers for the xv6 OS, developed a unix shell with piping, I/O redirection & signal handling.

Cafeteria Portal (MongoDB, Express, ReactJS, NodeJS, Docker) [Link](#)

Built a containerized multi-cafeteria portal with OAuth authentication for vendors to sell and customers to order using MERN stack.

SKILLS & INTERESTS

Skills - C/C++, Distributed Systems, SQL, HPC, MapReduce, Pthreads, Linux, Git, Python, Docker, MongoDB, React, Flutter, Bash

Interests - Competitive Programming, Strategy Games