Naman Jain

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Education

B.Tech. in Computer Science and Engineering   **GPA: 9.57/10.0**
Indian Institute of Technology, Kharagpur   *2018-2022*

Work Experience

Graviton Research Capital LLP   **Gurgaon, India**
Low Latency Software Engineer   *June 2022 - Present*
- Optimized code to significantly reduce critical path latency using cache optimizations, branch reduction, and better data structures.
- Introduced more Alphas and features for better understanding of the market as well as our own orders in the market.
- Reformated many core infrastructure modules to make them more consistent, bug-free, and development-friendly.

Nutanix, Inc.   **Bangalore, India**
Intern, Member of Technical Staff   *June 2021 - July 2021*
- Integrated NVMe Over Fabrics with the currently existing software stack of the company to perform I/O.
- Built a custom block device that acts as a plugin to the NVMe Over Fabrics and performs I/O to the underlying device.
- Increased the speed of I/O by many folds and opened up the possibility to use various transport types (TCP, RDMA, etc.).

Projects

Autonomous Ground Vehicle (AGV) Research Group ⌨   **IIT Kharagpur**
Software Team Member under Prof. Debashish Chakravarty   *Feb 2019-July 2020*
- Improved upon a real-time hybrid A* planner, a path planning algorithm.
- Introduced Voronoi fields for planning a path away from obstacles and used Reeds-Shepp curves for fast planning.
- Integrated Hybrid A* planner with the vehicle's sensor data on ROS to test it on Gazebo SIM as well as real Mahindra e2o vehicle.
- Worked on the Mahindra e20 Driverless Car Challenge with the task of building a driverless car for Indian roads.

Peer-2-Peer Chat Application, Course Term Project ⌨   **IIT Kharagpur**
Computer Networks Project under Prof. Sandip Chakraborty   *Jan 2021-Apr 2021*
- Built a server application using socket programming and the *select* system call, enabling users to send messages to each other.
- Implemented file transfer in blocks between server and client over stream sockets using POSIX C programming.

ResAuto - Restaurant Automation System, Course Term Project ⌨   **IIT Kharagpur**
Database Management Project under Prof. Shamik Sural   *Jan 2021-Apr 2021*
- Developed a web app in Django to order food items online, manage resources, maintain customer data, and use in-app currency.
- Implemented various dynamic features, like trending food items and the best-performing employees, using MySQL and Javascript.

Technical Skills

- **Languages:** C++, C, Python, JAVA, SQL, HTML, CSS, Javascript, Verilog, LaTeX, Bash
- **Frameworks:** Django, Git, Pytorch, Huggingface, Numpy, NLTK, Pandas, Solidworks, Gazebo, ROS

Awards and Achievements

- Among the **top 15 students**, among 1400+ undergrad students in terms of GPA
- Secured the **runner-up** position in the Auto-Nav Challenge, 27th IGVC among 40+ teams around the world; built a bot capable of autonomously traversing a grass course bounded by lanes, avoiding obstacles, and reaching some target GPS points.
- Secured a rank of **119** among coders all over the world in Google Kick Start Round C 2021.
- Secured team rank **16** in ACM ICPC Amritapuri Regionals 2020 and **41** in ACM ICPC Gwalior-Pune Regionals 2020.
- Secured **All India Rank 235** among 200k+ students in JEE Advanced 2022 (among one of world's toughest exam)
- Secured **All India Rank 231** among 1M+ students in JEE Mains 2022
- Secured **All India Rank 45** among 150k+ students in Kishore Vaigyanik Protsahan Yojana (KVPY) exam

Mentorship and Leadership

Mentor, IEEE Image Processing Winter Workshop, IIT Kharagpur   *Dec 2019-Jan 2020*
- Taught various Image Processing and Graph algorithms like edge & contour detection, noise removal, BFS, DFS, Dijkstra, A*.

Student Mentor, CSE Department & Grimoire of Code   *Dec 2020-Apr 2022*
- Responsible to guide 4 junior CSE students throughout their stay at IIT Kharagpur so that they can utilize their potential well.
- Mentoring and guiding a group of 7 junior students to help them have better competitive programming skills.

Volunteer, National Service Scheme(NSS)   *Aug 2018-Mar 2020*
- Taught the students of a primary school in Talbagicha village; part of Annual NSS Camp in Dec 2018 at the Khelar village.