



Aviral Jain

UG (III Year I Semester)
B.Tech. (Civil Engineering)
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Indian Institute of
Technology
Roorkee



VERIFIED

Area of Interest

Software Development, Information Security, Robotics, DevOps,

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2023	B.Tech. 2nd Year	Indian Institute of Technology, Roorkee	7.351
2020	Intermediate (Class XII)	Ashoka Hall Junior & High School(CBSE)	95.00 %
2018	Matriculate (Class X)	Ashoka Hall Junior & High School(CBSE)	87.00 %

Internships

Software Engineering Intern | Cloud Defense

February 2023 - March 2023

- Experience with AWS Lambda Functions: Proficiently developed, deployed, and optimized serverless applications using AWS Lambda, leveraging its scalability and cost-effectiveness.
- Integrated Lambda Functions with AWS Services: Successfully integrated Lambda functions with AWS services such as S3, EC2, and API Gateway, ensuring seamless functionality and efficient data processing.
- Performance Optimization and Security: Emphasized performance optimization by fine-tuning Lambda function configurations and employing best practices. Implemented secure access controls through IAM roles, ensuring robust security for serverless applications.

Google Summer Of Code | OWASP - OWTF

May 2023 - August 2023

- Implemented a secure authentication solution in React using local storage to maintain user authentication across page reloads, ensuring a seamless and protected user experience.
- Streamlined the Docker file to simplify installation on various platforms and improve the installation process of Python dependencies, enhancing development efficiency and ease of deployment.
- Developed a plugin to assess access control configurations and identify potential vulnerabilities in cloud storage systems, with a specific focus on identifying misconfigured Amazon S3 buckets.

Projects

GroupGo | IIT Roorkee

January 2023

- Developed and implemented a Group Buying feature, enabling users to form groups and make collective purchases. Resulting in increased sales and customer satisfaction.
- Integrated a secure crypto-currency transaction portal using Solana modules, expanding user payment options and enhancing the shopping experience.
- Deployed the website on Replit, ensuring easy accessibility and continuous deployment and collaborated with cross-functional teams to deliver a high-quality end product.
- Tech Stack: ReactJS, TypeScript, Solana.

Robotic Arm Simulation | IIT Roorkee

May 2022 - July 2022

- Developed a simulation of a Robotic Arm in a Gazebo Environment, utilizing a 3-D model created with SolidWorks. The simulation provided a virtual environment to test and visualize the arm's movement and functionality.
- Implemented ROS (Robot Operating System) to control the movement of the robotic arm. Leveraged the MoveIt framework, a widely-used motion planning framework in ROS, to enable efficient path planning and control of the arm's motion.
- Tech Stack: ROS, MoveIt Framework.

Restaurant of the future | IIT Roorkee

June 2022 - September 2022

- Developed and deployed an innovative autonomous restaurant service bot, revolutionizing the dining experience with its ability to handle plates and take customer orders independently.
- Leveraged LiDAR and Depth Cameras to enable precise navigation and obstacle avoidance for the bot, ensuring seamless movement within the environment and enhancing safety for both customers and the bot.
- Demonstrated expertise in integrating LiDAR and Depth Cameras into the bot's system, harnessing advanced algorithms to achieve reliable navigation and real-time obstacle detection.

Geomatics Survey Camp | IIT Roorkee

November 2022 - December 2022

- Utilized QGIS and ERDAS software to create a digitized map of Haridwar District, showcasing expertise in GIS tools.
- Gathered precise latitude, longitude, and orthometric heights of utilities marked on the digitized map, ensuring accurate spatial information.
- Conducted thorough pre-processing of collected data, implementing quality control measures to minimize human-induced errors and enhance data reliability.

Awards / Scholarships / Academic Achievements

- Finalist in Hacktheon Sejong onsite CTF held in South Korea.
- Secured 6th place globally in HackDay Qualifications 2023, as part of InfoSecIITR.
- Secured a position of 6325 in JEE-Advanced 2021.

Skills

Computer languages	Python, C++, JavaScript, TypeScript, HTML, CSS
Software Packages	Git, MySQL, Node.js, ReactJs, Docker, AWS EC2, AWS S3, WireShark, PIL, Ghidra, Burp Suite, ROS
Minor/Honors Courses	Economics
Languages Known	Hindi, English

Positions of Responsibility & Extra Curriculars

Core Member | InfoSecIITR

June 2022 - June 2023

- Engaged as an active participant representing InfoSecIITR in numerous online and onsite Capture the Flag (CTF) competitions.
- Facilitated informative sessions, workshops, and lectures covering various information security domains, including Web-Security, Forensics, Reversing, and more.
- Coordinated the successful execution of the Backdoor CTF with InfoSecIITR, aiming to foster a pervasive culture of information security awareness and knowledge.

Navigation & Control Head | Models And Robotics Section

June 2023 - Present

- Developed and executed a diverse range of robotics projects aimed at addressing practical challenges in the real world.
- Organized and facilitated open projects and Hackathons, such as Robothon, to cultivate a thriving Robotics culture among students.
- Provided mentorship to students engaged in open projects, assisting them in accomplishing their assigned tasks.