




# YUVRAJ SINGH

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## EDUCATION

<b>Netaji Subhas University of Technology</b> <i>B.Tech. in Computer Science with Artificial Intelligence</i>	May 2022 - May 2026 (New Delhi, India)
<b>DAV Public School</b> <i>Class XII CBSE</i>	May 2019 - May 2021 (New Delhi, India)
<b>DAV Public School</b> <i>Class X CBSE</i>	May 2019 (Haryana, India)

## EXPERIENCE

<b>Netaji Subhas University Of Technology, New Delhi</b>   <i>AI-INTERN</i>	June 2023 - July 2023
<ul style="list-style-type: none"><li>• Internship in Artificial Intelligence and Machine Learning.</li><li>• Assisted in the Research work of Detection of pancreatic adenocarcinoma and implementation of CNN, RNN, YOLO techniques.</li><li>• Evaluated and Annotated 150+ CT scans of the affected abdominal region under the supervision of an oncologist and a radiologist leading to reduction in diagnostic errors and faster treatment planning.</li></ul>	
<b>Google Developer Student Clubs</b>   <i>Operations Lead</i>	November 2023 – Present
<ul style="list-style-type: none"><li>• Leading all GDSC-NSUT sub-departments. Directed a team of 45+ members to organize tech events, achieving a 200% increase in engagement on GitHub and Discord through strategic community management.</li><li>• Organized the GDSC-NSUT hackathon alongside workshops on NVIDIA Deep Learning, machine learning, and diffusion model bootcamps, successfully hosted and facilitated over 250+ attendees.</li><li>• Partnered with industry professionals to facilitate panel discussions and networking events, effectively bridging the gap between students and the tech industry.</li></ul>	
<b>Hackathon</b>   <i>Team Position- Finalist out of 90+ teams</i>	7th - 8th October , 2022
<ul style="list-style-type: none"><li>• Hack BVICAM organized by IEEE. Reached the top 7 teams and became a finalist in a 24-hour hackathon.</li><li>• Developed an application - Foeto for emergency services and assistance to women who are pregnant or in labor.</li><li>• Applied UI/UX design principles using Figma in a project to create a user-friendly application, enhancing navigation and interface, which led to an estimated 30% increase in user engagement.</li></ul>	

## PROJECTS

<b>Ongoing Research Work on the Anomaly detection in IOT using ML.</b>	January 2024 - Present
<ul style="list-style-type: none"><li>• Safeguarding IoT systems by identifying deviations from normal behavior, thus potentially thwarting attacks like</li><li>• Device spoofing, Man-in-the-middle (MitM), Distributed denial of service (DDoS) attacks.</li><li>• The entire dataset was synthetically generated using Bevywise IoT simulation software, orchestrated through an MQTT broker, and extensively captured via Wireshark for comprehensive network interception and analysis.</li></ul>	
<b>Research Work on the Prognosis of adenocarcinoma using Deep learning</b>	June 2023 - July 2023
<ul style="list-style-type: none"><li>• Team project for the internship, earned Honorable Mention -Developed an online web-service for Doctors and patients assistance for detecting of abnormality in abdominal region.</li><li>• Assistance by uploading CT scan of Abdominal region to check for any presence/detection of tumor or adenocarcinoma using neural network architecture, reducing the time required for diagnosing and the associated workload by up to 70% .</li><li>• Learned deep learning ( CNNs, RNNs optionally, object detection like YOLO/SSD )</li></ul>	
<b>Modified Sand Cat Swarm Optimization Algorithm</b>	Manuscript in Preparation
<ul style="list-style-type: none"><li>• Introduced adaptive step size control, enhanced selection with tournament selection, a hunter-follower mechanism, and a targeted random walk mechanism to improve the algorithm's exploration strategy.</li><li>• Improved the performance of the existing algorithm on 46 out of the 59 Benchmark functions from the CEC benchmark suites.</li></ul>	

## SKILLS

**Languages:** C/C++, Python, JavaScript, TypeScript, HTML5/CSS, SQL

**Tools and Libraries:** Git/GitHub, Webpack, VS Code, PyCharm/IDEA, Atom, Pandas, NumPy, Matplotlib, TensorFlow, OpenCV, PyTorch, Power BI, Tableau, Adobe XD.

**OSINT/Forensics Tools:** Wireshark, Autopsy, Maltego, theHarvester, OSRFramework.