

Arvinder Singh Dhoul

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PROJECTS

Blackboard Tool | [Live](#) | [GitHub](#)

React.js, Node.js, Vite, Bootstrap, Rough.js

- Integrated 5+ drawing tools and real-time multi-user support with response times under **100 ms**, enabling seamless collaboration.
- Designed and implemented undo/redo functionality, improving user efficiency by **30%** during drawing sessions.
- Added a clear whiteboard option that reset the board for users, contributing to a **25% improvement in task completion speed**.

Algorithm Visualization Tool | [Live](#) | [GitHub](#)

JavaScript, HTML, CSS, Node.js

- Developed an interactive platform to visualize **10+ algorithms** with step-by-step visualizations.
- Reduced algorithm learning time by **60%** using intuitive user controls and dynamic visual aids.
- Improved user engagement and comprehension by **45%** with adjustable visualization speeds and user-driven exploration.

Define-It | [Live](#) | [GitHub](#)

JavaScript, HTML, CSS, Node.js

- Developed a comprehensive word-search platform, reducing search time by **35%** compared to traditional methods.
- Supported language learners with faster and more intuitive word lookups, increasing user retention by **20%**.
- Optimized the backend to handle **thousands of queries per minute**, ensuring fast and reliable performance.

Arduino-Based Solar Tracker System | [Check it out](#)

Arduino UNO, Servo Motor, Arduino Code

- Achieved a **15-20% increase** in energy collection efficiency through dynamic solar panel alignment using LDRs and a servo motor.
- Reduced manual adjustment efforts by **100%**, enabling fully automated solar tracking.
- System successfully improved power output, boosting overall project ROI by **10-15%**.

Text-to-Image Tool | [GitHub](#)

Python, Pandas, Numpy, Matplotlib, cv2, diffusers, transformers

- Integrated models from Hugging Face and Stable Diffusion, resulting in the creation of high-quality images in under **5 sec**.
- Enabled generation of high-quality images from text descriptions

Multilingual Video Dubbing Tool | [GitHub](#)

Python, googletrans, streamlit, SpeechRecognition

- Automated English-to-Indian language dubbing for 5+ Indian languages, cutting translation and dubbing time by **50%**.
- Integrated the Google Translate API and SpeechRecognition, enabling real-time dubbing with over **95% accuracy**.

TECHNICAL SKILLS

Languages: JavaScript, Python, C/C++, SQL, HTML/CSS

Frameworks: React, Node.js, Express.js, Flask, Bootstrap,

Databases: MySQL, MongoDB, SQLite

Developer Tools: Git, Docker, Vite, Amazon Web Services, Google Cloud Platform, VMWare, VS Code, PyCharm, Google Collab, Jupyter Notebook, Trello, PostMan

Libraries: Pandas, Numpy, Matplotlib, OpenCV, CV2, NLTK, RASA, PyAutoGUI, pyttsx3

Network & Security : VPC, IAM, Firewalls and Security Groups

Network Configuration : Cisco Routing and Switching, Cisco Packet Tracer

Protocols & Services : DNS, DHCP, HTTP/HTTPS, SMTP, SSH, OSPF, RIP, EIGRP, BGP, NAT, PAT, ACL

IoT : Have worked with Arduino Boards (UNO & NANO), and sensors like ultrasonic, LDR, IR etc.

Soft Skills : Verbal & Written Communication, Design Thinking, Critical Thinking, Orator, Decision Making

EDUCATION

Rajiv Gandhi Proudlyogiki Vishwavidyalaya

Bachelor of Technology in Computer Science & Business Systems CGPA : 8.01

Madhya Pradesh, India

Oct. 2022 – May 2026(expected)

EXTRA-CURRICULAR ACTIVITIES & ACHIEVEMENTS

- Completed** the AWS APAC Solutions Architecture virtual experience program on Forage, gaining practical skills in cloud solutions.
- Solved** 180+ coding problems on LeetCode, enhancing problem-solving and algorithmic expertise.
- Finalized** as a top contender in the **Smart India Hackathon 2023**, showcasing innovative solutions in a national-level competition.
- Reached** the finals in the **Solve to Evolve Hackathon**, organized by E-cell IIT Madras, by presenting cutting-edge tech ideas.
- Earned** the **NPTEL Elite Certificate** in DBMS and Ethical Hacking, demonstrating proficiency in database management and cybersecurity.
- Led** a team in organizing an **Ideation Competition** using Design Thinking principles, fostering creativity and innovation.