

ABHAV GOEL

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Education

Thapar Institute Of Engineering and Technology

Bachelor of Engineering in Computer Science and Engineering, CGPA: 8.22

2020 - 2024

Patiala, Punjab

Delhi Public School

PCM, CBSE 12th : 95.4%

2019 - 2020

Saharanpur, Uttar Pradesh

Delhi Public School

10th: 95.2%

2017 - 2018

Saharanpur, Uttar Pradesh

Work Experience

Cadence Design Systems

Jan 2024 – Jun 24

Software Engineering Intern

Noida, UP

- Enhanced the Quantus tool by implementing internal and customer-related bug fixes and improvements.
- Developed an error summary feature segregating unique errors by CPU, **reducing debugging time by 20%**.
- Implemented **new** common options to specify GDSII/OASIS files, **reducing customer effort by 50%**.
- Resolved compatibility issues by porting source code to **RHEL8 and GCC12**, adhering to strict compilation rules.
- Introduced warnings for unsupported options, **improving user experience** and reducing errors.
- Identified and reported **15+ faulty code changes** that caused regression failures, ensuring software stability.

Ministry of Defence, R&D India

May 2023 – July 2023

Research Intern

Hybrid

- Developed python scripts for smooth collection and cleaning of data, **enhancing the process by 33%**.
- Leveraged Roboflow to accelerate image augmentation, achieving a **2x** improvement in workflow.
- Successfully developed a prototype that gave optimal results in real-time object detection with **mAP50 score of 0.869**.

Technical Skills

Languages: C++, Java(basics), Javascript, Python, SQL, Shell Scripting

Libraries/Frameworks: Node.js, Express.js, React

Databases: MongoDB, PostgreSQL

Developer Tools: Git, Github, VS Code, Perforce

OS: Windows, MacOS, Linux

Projects

ThoughtNest | Node.js, Express.js, MongoDB, EJS

[\[Link\]](#)

- Developed REST APIs and backend for CRUD operations on blog posts, comments and user management.
- Implemented authentication and authorization using JWT tokens to secure user data and manage roles.

ShortIt | Node.js, Express.js, MongoDB, EJS

[\[Link\]](#)

- Designed the backend for ShortIt - a URL shortening service.
- Implemented role-based authentication and authorization by cookies and JWT through middlewares in Express.js
- Included an endpoint for users to view analytics for their shortened URL.

IntelliChoice - Streamlining Decision Making | Python, Flask

[\[Live link\]](#)

- Engineered a **python package** that implements **TOPSIS** algorithm, a multiple-criteria decision-making tool.
- Used vectorization to for mathematical computation, reducing calculation time by 40%.
- Created a Flask web service for TOPSIS scores and ranks, delivering results via email within 2 seconds.

Position of Responsibility

Technical Team Lead

2021 – 2022

Backslash Computing Society

Patiala, Punjab

- Led a team of **15+** members to organize impactful Inter and Intra institute events, engaging over **800+** participants.
- Crafted precise event plans and question sets, ensuring the smooth flow of contests and activities.
- Provided guidance to foster teamwork, resulting in the successful execution of **3** diverse events.

Achievements

- Finalist TechGig CodeGladiators 2023. AIR **700** against a pool of 136000+ coders. Rewarded cash prize of 500Rs.
- Global rank 1515 in Leetcode Weekly contest 356.
- Served as a repository Maintainer for HacktoberFest'21 - an open-source event with over **50+** contributors. [Link](#)