# TEJAL POONIA

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# EDUCATION

## National Institute of Technology (NIT), Hamirpur

2019 - 2023

Bachelor of Technology in Mechanical Engineering

CGPI: 8.54/10

## Work Experience

#### **Goods and Services Tax Network**

July 2023 - Present

Software Engineer

Delhi

- Developed a fusion filter in C++ for optimizing and consolidating data sets, improving data efficiency by 40%.
- · Architected and developed a logging server using C++ and OOP principles, utilizing RADS and shared memory for communication between the server and various client applications.
- Designed a flexible JSON message format using rapidJSON for dynamic messages from different applications. Developed parsers and routing logic to interpret and relay messages based on content and metadata.

Maruti Suzuki Pvt. Ltd. June 2022 – July 2022

Automobile Industrial Trainee

Jaipur

- · Performed comprehensive analysis of wheels and tires on various vehicles
- Conducted essential tire services including changes, rotations, and wheel alignments
- · Executed precise tire and wheel assembly balancing to optimize vehicle performance

## **PROJECTS**

## **Dynamic Routing and Mapping** | C++, Data Structure and Algorithms

- Implemented Dijkstra's and A\* algorithms to dynamically calculate the fastest routes, improving navigation efficiency by 30.
- Integrated GNSS for real-time vehicle tracking with 80% accuracy, ensuring precise and reliable location data.
- Developed a system for real-time guidance by dynamically computing distances to upcoming turns, enhancing travel optimization.

## **Path Find Visualizer** | C++, Data Structure and Algorithms, OOPS

- Developed a web application for pathfinding in 2D mazes using Dijkstra's, BFS, and DFS algorithms.
- Implemented user-interactive features including customizable start/end points and grid generation.
- Designed advanced functionality such as weighted nodes, obstacle placement, and pathfinding animations.

# TECHNICAL SKILLS

Languages: C, C++, Python, HTML, CSS

Technologies: Django, SQL, AWS

Concepts: OOPS, DSA, System Design, DBMS, API

# ACHIEVEMENTS & EXTRACURRICULAR ACTIVITIES

- Achieved 8th Kyu (Yellow Belt) in Seiko Kai Karate International India.
- Holder of B and C Certificates in National Cadet Corps (NCC).
- Received Certificate of Appreciation for dedicated membership in Ek Bharat Shreshtha Bharat Club, NITH (2020-2021).
- Awarded Gargi Pursakar (Gargi Award) for excellent performance in High School (2016).
- NCC (National Cadet Corps) April 2019 to 2022: Served as Cadet in Army NITH, participated in training camps and activities.
- Active participant in Martial Arts Karate Academy events at NITH (2019-Present).