Ayush Lochan

B.Tech in Computer Science and Engineering

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TECHNICAL SKILLS

- **Programming -**: C/C++, Java, Python, SQL
- **Developer Tools -**: VS Code, Android Studio
- **Operating Systems -**: Windows, Linux
- **Technologies/Frameworks -**: HTML, CSS, JavaScript, GitHub, ReactJS, NodeJS, ExpressJS, Git, MongoDB

EDUCATION

Ramdeobaba University, Nagpur, Maharashtra	**Nov 2022 - May 2026**
B.Tech in Computer Science and Engineering	*CGPA: 9.3/10*
Hons in Full Stack Development	

Sarwashree Junior College, Nagpur, Maharashtra	**Mar 2022**
Higher Secondary Education	*88%*

M.K.H Sancheti Public School, Nagpur, Maharashtra	**Mar 2020**
Secondary Education	*86.4%*

PROJECTS

- **Sign Language to Text and Audio Conversion**

  Tech Stack: Python, TensorFlow, Keras, NLP, JavaScript

  – Designed a real-time sign language recognition system with 97% accuracy, converting gestures into text and audio to enhance accessibility.

  – Utilized CNN and LSTM models for gesture detection and translation, with data augmentation improving training data by 30%.

  – Created robust frameworks employing NLP technologies alongside speech generation systems to deliver precise sentence structure and seamless translations; findings helped address the three biggest causes of miscommunication during testing phases.

  – Created browser extensions for video conferencing tools like Zoom and Google Meet, ensuring near-instantaneous translation of spoken language into written form while maintaining under 50ms latency across all devices used in testing.

  – Focused on edge devices, achieving real-time performance with under 50ms latency and minimal resource usage (less than 20MB per device).

- **Enhancing Navigation for Railway Station Facilities**

  Tech Stack: JavaScript, Leaflet.js, OpenRouteService API, Google Geocoding API, AR.core, Node.js, MongoDB.

  – Developed a web-based navigation system to enhance accessibility in railway stations, integrating real-time location tracking and route optimization for key facilities like restrooms, ticket counters, and exits.

  – Utilized Leaflet.js and the OpenRouteService API to create an interactive map, supporting navigation for over 600 stations with real-time directions.

  – Integrated Google Geocoding API and AR.core for augmented reality (AR)-driven navigation, offering real-time directions using mobile camera input for an enhanced user experience.

  – Implemented an efficient search functionality, delivering optimized routes within 3 seconds, resulting in significant improvements in user navigation efficiency and reducing time spent searching for key station amenities.

  – Leveraged Node.js and MongoDB to handle backend services and store station data, ensuring scalability and performance across large datasets.

ACHIEVEMENTS

- Contest rating 1623 on CodeChef (3 star)
- Contest rating 1800 on leetcode
- 250 plus questions solved on leetcode
- Earned Explorer Badge on HackerEarth for solving coding challenges.