

**Summer Training Report**  
**on**  
**VOCATIONAL TRAINING**  
**at**  
**INDIAN RAILWAY**  
**Under the South Eastern Central Railway Bilaspur**

**Submitted in partial fulfilment of the requirement for the award**  
**Of**  
**BACHELOR OF TECHNOLOGY**  
**IN**  
**COMPUTER SCIENCE ENGINEERING**

**Submitted by:**  
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**Submitted To:**  
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**DEPARTMENT OF COMPUTER SCIENCE &**  
**ENGINEERING, SCHOOL OF STUDIES, ENGINEERING &**  
**TECHNOLOGY, GGV**  
**KONI, BILASPUR, CHATTISGARH**  
**2024-2025**



# SOUTH EAST CENTRAL RAILWAY


## TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. Lokendra Mandavi**, Student of 6th Semester, Studies in **Computer Science & Engineering** from **Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)** has attended Bilaspur Division of South East Central Railway for Vocational Training and Internship from Dated 03/06/2024 to 30/06/2024, in: -

1. UTS
2. PRS
3. IPIS
4. TELEPHONE EXCHANGE
5. RAILNET
6. OFC
7. BATTERY MAINTENANCE
8. IPS
9. PROJECT

He was found sincere, laborious, and interested to the task given to him. Throughout the internship **Lokendra** has worked ethically, followed the instruction, performed necessary task, and worked with minimum supervision.

Date:08/07/2024

  
Div. Signal & Tele. Engg.  
SOUTH EAST CENTRAL RAILWAY, BILASPUR  
मण्डल सीके एवं टेली. इंजीनियर  
दक्षिण पूर्व रेलवे विभाग, बिलासपुर  
South East Central Railway/Bilaspur

## INTRODUCTION

### 1. INDIAN RAILWAYS

Indian Railways, abbreviated as IR, is the state-owned railway company of India, which owns and operates most of the country's rail transport. It is overseen by the Ministry of Railways of the Government of India. Indian Railways has one of the largest and busiest rail networks in the world. It is one of the world's largest commercial or utility employers, with more than 1.4 million employees. The railways traverse the length and breadth of the country, covering 6,909 stations over a total route length of more than 63,327 kilometres (39,350 mi). As to rolling stock, IR owns over 200,000 (freight) wagons, 50,000 coaches and 8,000 locomotives (Approx).

#### 1.1 Historical Background

The history of Indian Railways began in the early 19th century, a period marked by British colonial efforts to modernize infrastructure in India. The idea of establishing a railway network was conceived by the British East India Company to improve the transportation of goods and troops across the subcontinent. On April 16, 1853, the first passenger train journeyed from Bombay (now Mumbai) to Thane, covering a distance of 34 kilometres (21 miles). This inaugural run marked the beginning of the Indian Railways, setting the stage for a vast and intricate network that would soon span the length and breadth of the country. Throughout the latter half of the 19th century and into the early 20th century, the Indian Railways expanded rapidly. This growth was driven by several railway companies established by the British, which played a crucial role in the British Raj's economic and military strategies. Railways facilitated the efficient movement of raw materials and resources, and their importance was particularly evident during both World Wars, when they were used extensively for transporting troops and war supplies. With India gaining independence in 1947, the newly formed government faced the challenge of integrating and nationalizing the diverse railway systems that had been previously managed by various companies. In 1951, the Indian Railways was nationalized, leading to the creation of a unified network under the Ministry of Railways. This period marked the beginning of a new era of centralized control and expansion, aimed at unifying the rail network and enhancing its efficiency and reach across the vast country.

In the decades following independence, the Indian Railways embarked on a journey of modernization and expansion. The network saw the introduction of new technologies,