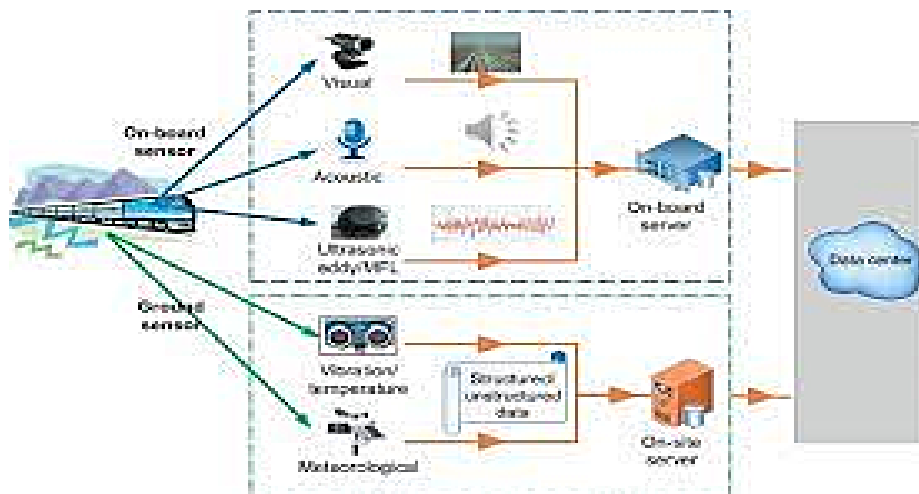


# **Project Design Phase-II**

## Technology Architecture

<b>Date</b>	<b>20October2022</b>
<b>Team ID</b>	<b>PNT2022TMID44256</b>
<b>Project Name</b>	<b>Smart Solution for Railways</b>

### Technical Architecture:



**Table-1 : Components & Technologies:**

<b><u>S. No</u></b>	<b><u>Component</u></b>	<b><u>Description</u></b>	<b><u>Technology</u></b>
<b><u>1</u></b>	<b><u>Web UI</u></b>	<b><u>User can login and book their ticket through the website based on the availability of the seats.</u></b>	<b><u>HTML, CSS, JavaScript</u></b>
<b><u>2</u></b>	<b><u>Cloud Services</u></b>	<b><u>Requirements filled by the passenger is stored in the cloud database.</u></b>	<b><u>Python</u></b>
<b><u>3</u></b>	<b><u>GPS Tracking</u></b>	<b><u>Live Location details shared through the code to share the location in</u></b>	<b><u>IBM Watson Service</u></b>

		<u>the website</u>	
<b><u>4</u></b>	<b><u>External API-1</u></b>  <b><u>Sabre API</u></b>	<b><u>Used for rail schedule, ticketing and travel documents generation, cancellation.</u></b>	<b><u>Sabre API</u></b>
<b><u>5</u></b>	<b><u>External API-2</u></b>	<b><u>Used for combining carriers and ticket types,</u></b>  <b><u>Multilanguage &amp; currency support.</u></b>	<b><u>Trainline B2B API</u></b>
<b><u>6</u></b>	<b><u>Data Processing</u></b>	<b><u>Ticket is verified with the unique ID generated with the cloudant DB</u></b>	<b><u>Python, IBM cloud</u></b>

**Table-2: Application Characteristics:**

<b><u>S. No</u></b>	<b><u>Characteristics</u></b>	<b><u>Description</u></b>	<b><u>Technology</u></b>
<b><u>1</u></b>	<b><u>Open-Source Frameworks</u></b>	<b><u>CSS, Backend framework,</u></b>	<b><u>Python, IBM cloudant DB</u></b>
<b><u>2</u></b>	<b><u>Security Implementations</u></b>	<b><u>Data entered are encrypted, Continuous Location Tracking</u></b>	<b><u>Python, Cloud service</u></b>

<b><u>3</u></b>	<b><u>Scalable Architecture</u></b>	<b><u>The scanner and the codes written are highly scalable where any implementation can be done anytime needed</u></b>	<b><u>Python</u></b>
<b><u>4</u></b>	<b><u>Availability</u></b>	<b><u>Any time available system. The ticket can be verified by the ticket collector from anywhere.</u></b>	<b><u>IBM Load Balancer</u></b>

<u>5</u>	<u>Performance</u>	<u>Though the details are get stored in the cloud the system crash will not affect the data. The data can be retrieved from anywhere with a scanner. And the GPS states the exact location of the train.</u>	<u>Distributed Services, GPS Tracker</u>
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