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DEVELOPMENT OF WEB APPLICATIONS AND SERVICES FOR WABTEC

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Under the guidance of

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The internship was primarily focused on three projects. The first was the **Analyze Tracker and Monitoring Application,** aka. **ATMA,** which would be then integrated to all W abtec applications and start tracking user interactions and visualize them to the Executives beautifully and yet efficiently. Previous such frameworks did not exist and tracking heavily relied on poorly optimized jQuery functions which often tracked wrong statistics or sometimes just straight not work. The second project was **Digital Pool Application Development.** Wabtec, as a company dealing with locomotives, must regularly deal with defective or malfunctioning locomotives also called 'Dirty' locomotives. Hence, there is a need for tracking said combos (part of a locomotive) effectively and keep a record in the database. Previously such work was done by sending email or notifications of each combo going through these stages; which after a while became tiresome. Hence the idea of this application was born. The third project was **Migration of Digital Pool to Wabtec Environment.** Previously, Digital Pool was developed as a GE application. Hence, the need of migrating the entire application to Wabtec was born.

The language used for ATMA was JavaScript. It is a JavaScript Library which when embedded throughout an existing application/website starts tracking and sending useful usage statistics to a database in cloud which is then fetched to be displayed in a beautiful dashboard. Digital Pool Application Development used AngularJS for development. Git was used for collaboration and Jenkins for deployment to an AWS server. PostgreSQL was used for backend database and Spring Boot was used for creating services. Migration of Digital Pool to Wabtec Environment was achieved by making the application to point to the Wabtec servers. It also included UI changes, Notification changes and UI Database mapping changes.

The statistics generated and displayed beautifully using charts and graphs by ATMA shall be viewed and used by Managers to Senior Executives in Wabtec Corporation. This will help both Employees and Clients to further improve their products and make apps/services with great User Experience. The developments made in the Digital Pool web application will provide an easy and maintainable UI for executives, managers and customers to tracks combos across the world in various workshops along with useful statistics and notifications. The move to Wabtec will also help in the ongoing process of migrating all things GE Transportation from GE to Wabtec servers.