
HR Talent Management and Analytics Platform

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Motivation

Human resources (HR) practices consist of a set of policies and procedures that are developed to nurture the human capital of an organization. HR policies help streamline HR functions such as recruitment, compensation, performance Management and learning & development.

Today a wide variety of HR software products are available in the market to address HR needs of organizations. However, since every company's HR policies are developed to suit their own operations, for a product that is bought off the shelf to be effective it would need to be customized. And customization efforts require significant time and money.

The HR team of our client opted to custom-build an HR analytics software product.

Problem

The client required a dedicated human resources management and analytics platform that can collate current and historical HR data of the organization. Apart from building a custom HR solution that captures personnel data, the client required the product to also capture the skill hierarchy present in the organization. This meant capturing the diverse range of scientific skills which the employees possessed / or trained for, which were very specific to their industry. An approval process that mimicked the organizational hierarchy was required.

Another customization required by the client was a functional skill gap matrix which, as the name suggests, helps identify resources based on technical expertise and highlights areas where gaps exist. Other features envisaged include: the ability to create a performance appraisal workflow and data storage on cloud. The client also required data visualization features that assisted in the assessment of the employees.

Solution

The custom-built human resources management and analytics application is a one-stop comprehensive solution for performance management with provisions to visualize the data and gain insight through analytics. The application is capable of tracking both recent and historical variations of the organizational HR data. The primary focus of all data maintained is analyzed across - 1) Organizational hierarchy 2) Skill hierarchy - (technical and behavioural versions).

The built in skill gap analysis matrix assists in swift identification of resources for high priority projects and recruitment planning by HR and senior management. The career planning interface facilitates the performance appraisal process by allowing each employee to list their career goals on a short term, mid-term and long term basis which will then be reviewed in the in-built approval process. An additional interface allows employees to record their individual contributions to the organization such as patents, product launches, project consultation and additional skill training completed in a particular time duration.

Centralized dashboards have additional analytics that provide each employee a comparative understanding of their position within the organization on the basis of technical and leadership skills. Visualization charts like Spyder, Sunburst, Pyramid and Bubble charts cater to analytics required for easy assessment of employee performance and skill distribution of employees respectively.

The application has been developed using the client-server architecture. The backend is developed in Node.js using the Fastify framework hence high performance and low overhead is ensured. On the client side we have used Angular.js., a robust and scalable front-end framework. The MySQL database was chosen for data persistence and additionally, we have packaged the application using Docker, which facilitates efficient deployment and management of the application across different environments.

KEY HIGHLIGHTS

