Project Report ON

Recruitment Intelligence Tool Submitted By

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CERTIFICATE

This is to certify that the project work titled "Recruitment Intelligence Tool" is a bonafide project work submitted by M.SIVA SAI (R!70057) in the department of COMPUTER SCIENCE AND ENGINEERING in partial fulfillment of requirements for the award of degree of Bachelor of Technology in Computer science and engineering for the year 2022-2023 carried out the work under the supervision.

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ABSTRACT

The "White Carrot's Recruitment Intelligence Tool" is committed to transforming the hiring process by focusing on four key pillars: adaptability,data-driven decision making,candidate experience, and the ability to train and influence hiring managers.

Adaptability is crucial in a constantly evolving job market, and our product has been designed to meet the ever-changing needs of our clients. We have developed a flexible system that adapts to our clients' unique hiring needs, ensuring that they can stay ahead of the competition.

Data-driven decision making is another pillar of our approach. By leveraging data and analytics, we are able to provide our clients with insights that help them make better hiring decisions. Our platform provides real-time metrics on the hiring process, allowing our clients to make informed decisions quickly and efficiently.

Candidate experience is a key focus for us, as we believe that a positive candidate experience is critical to attracting and retaining top talent. Our platform provides a seamless and intuitive experience for candidates, from application to on-boarding, ensuring that they feel valued and respected throughout the process.

Finally, our ability to train and influence hiring managers sets us apart from other hiring solutions. We provide training and guidance to help hiring managers make better decisions, and our platform allows them to collaborate with other stakeholders in the hiring process.

Through our innovative approach, we have been able to significantly reduce the amount of time and resources required to make quality hires. Our engineering team typically spends 30 hours per hire, but with our product, our clients have been able to cut that down to just 10 hours. Additionally, we have reduced candidate wait time and Time-To-Hire for desirable candidates from 6 weeks to just 3 weeks. Most importantly, our product has been shown to improve the quality of shortlisted candidates by an impressive 50%.

Overall, our project report showcases our team's dedication to transforming the hiring process and the tangible results we have achieved through our four pillars. We are proud to be at the forefront of innovation in the hiring space and look forward to continuing to help our clients make better hiring decisions.

INTRODUCTION

The process of hiring top talent in today's job market can be both time-consuming and frustrating. The average time spent on hiring one person is 50+ hours, with recruiters and engineers spending 25+ hours each. The entire process can take up to 62 days, leaving both employers and job seekers exhausted and unmotivated.

This is where "White Carrot's Recruitment Intelligence Tool" comes in. We deeply care about this problem and are committed to finding a solution. We believe that people should have the opportunity to find joyful work and expand their zone of genius, but current systems don't support this very well. Going freelance is often the only option available, but it is a high-risk endeavor with low chances of success.

Our mission is to reinvent how talent gets hired and up-skilled in this world. We understand that noise in recruitment is the biggest reason for broken talent mobility, both within and outside organizations. Technologies and network systems in the talent market create friction instead of encouragement for people wanting to be more mobile. We are here to change that.

Through our talent mobility marketplace and recruitment intelligence platform, we aim to create an environment that supports job seekers and employers alike. Our goal is to reduce the time and effort required to find the right fit, ultimately leading to happier, more productive employees and more successful organizations. Join us on our mission to transform the hiring process and create a better world of work for all.

PURPOSE

The process of hiring top talent in today's job market can be both time-consuming and frustrating. The average time spent on hiring one person is 50+ hours, with recruiters and engineers spending 25+ hours each. The entire process can take up to 62 days, leaving both employers and job seekers exhausted and unmotivated.

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The project aims to build a job marketplace network that connects experienced and boot camp candidates with industry professionals to become creators/vendors. The platform will also feature a freelance HR professional network, which will allow recruiters, hiring consultants, and mobility experts to build their businesses on the product. Additionally, the platform will include a freelance professional corporate coaches network, which will enable them to build their coaching businesses on the product.

PRELIMINARIES

JAVASCRIPT:

JavaScript is a high-level, interpreted programming language commonly used for web development. It runs on the client-side of web applications and can manipulate the Document Object Model (DOM) to dynamically change the content and style of web pages. It has a rich set of built-in functions and libraries that make it easy to add interactivity and functionality to web applications. JavaScript can be used on both the client-side and server-side of web development, making it a versatile language. Overall, JavaScript is an essential part of modern web development.

VUE JS:

Vue.js is a JavaScript framework for building user interfaces. It's similar to React, but it has a different approach: instead of using components like React does, Vue uses templates with data binding and custom events (called v-on).

Vue also has some other interesting features that make it stand out from other frameworks, including one-way data flow and reactivity (the ability to automatically update your application when something changes).

NODE JS:

Node.js is an open-source, cross-platform, server-side JavaScript runtime environment. It allows developers to write server-side applications in JavaScript, which makes it easier to build scalable and high-performance applications. Node.js is built on the V8 JavaScript engine, which provides a high-performance environment for running JavaScript code. It also has a rich set of built-in modules and packages, such as the HTTP module, that make it easy to build web servers and web applications. Node.js is also popular for its event-driven, non-blocking I/O model, which allows for high concurrency and scalability. Overall, Node.js is a powerful platform for building server-side applications and is widely used for web development, API development, and real-time applications.

Node.js also has a vast ecosystem of packages and modules, making it easy to add functionality to your applications. This includes packages for working with databases, image processing, authentication, and more.

POSTGRESQL:

PostgreSQL is a powerful open-source relational database management system. It is known for its scalability, reliability, and robustness. PostgreSQL is used by many companies to store and manage large volumes of data. It supports multiple programming languages, including SQL, Python, and Java, making it a versatile option for developers. PostgreSQL also offers advanced features such as transactions, data integrity, and concurrency control. Overall, PostgreSQL is an excellent choice for businesses looking for a reliable and scalable database management system.

MYSQL:

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter My and "SQL", the acronym for Structured Query Language. A relational database organizes data into one or more data tables in which data may be related to each other. These relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database

TAILWIND CSS

Tailwind CSS is a utility-first CSS framework that provides a set of pre-designed and customizable CSS classes to quickly build modern user interfaces. It is known for its simplicity, flexibility, and efficiency, and it helps developers write less CSS code while improving productivity. Overall, Tailwind CSS is an excellent choice for developers who want a fast and easy way to create beautiful user interfaces.

NESTJS:

NestJS is a progressive Node.js framework for building efficient, scalable, and enterprise-grade server-side applications. It uses modern JavaScript, is built with TypeScript and combines elements of object-oriented programming (OOP), functional programming (FP), and reactive programming.

NestJS also has an extensive set of built-in modules and packages, which make it easy to handle common tasks such as handling HTTP requests, interacting with databases, and managing authentication and authorization. It also supports other popular libraries and tools such as GraphQL, WebSockets, and Passport.

Overall, NestJS provides developers with a powerful and flexible toolset for building server-side applications, making it a popular choice for building APIs, microservices, and full-stack applications.

TypeORM:

TypeORM is an Object-Relational Mapping (ORM) library for TypeScript and JavaScript. It allows developers to interact with relational databases using object-oriented programming techniques and provides a way to map database tables to TypeScript classes and their properties to table columns.

Overall, TypeORM is a powerful ORM library that simplifies the interaction between applications and databases. It provides a type-safe way to interact with databases, simplifies the process of defining database models, and supports a wide range of databases and features, making it a popular choice for building modern web applications.

Bootstrap Vue:

Bootstrap Vue is a popular open-source toolkit for building responsive, mobile-first web applications using Vue.js. It combines the power of Bootstrap, a popular front-end framework, with Vue.js, a powerful JavaScript framework for building user interfaces. Bootstrap Vue provides a set of reusable components, such as buttons, forms, and modals, that can be easily customized and extended.

Bootstrap Vue is designed to be easy to use and flexible. It can be installed using popular package managers such as npm and Yarn, and it can be used with other popular tools and libraries such as Vuex, Vue Router, and Axios.

Overall, Bootstrap Vue is an excellent choice for developers who want to build beautiful and responsive web applications using Vue.js, while leveraging the power and flexibility of Bootstrap.

Modules

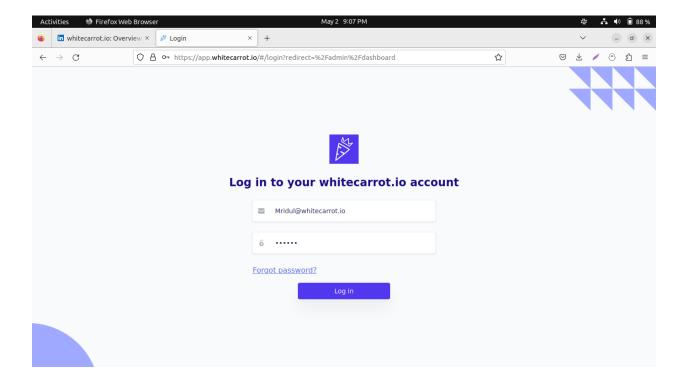
Login:

The system has 2 types of users – Admin and Company Admin Each user type has its set of privileges and permissions.

The login process ensures that only authorized users can access the system, and their roles and permissions are validated before granting access. Overall, the system aims to provide a seamless experience to all users, ensuring that they can perform their tasks efficiently and effectively.

Admin Login:

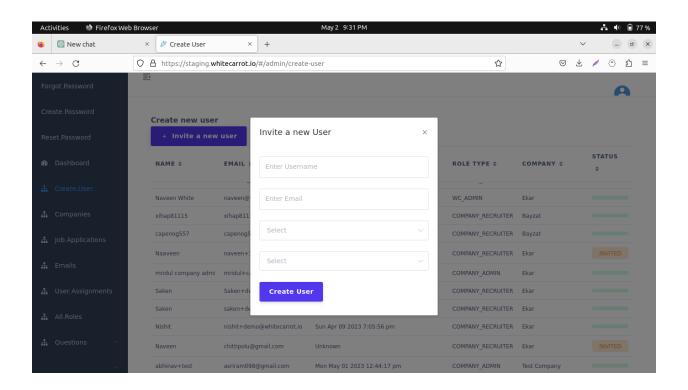
As an admin user, you will have access to certain modules and features that regular users do not have. If you login as admin, you can access the following modules



Create A User:

The Create A User module is a feature that allows WhiteCarrot administrators to create new users by inviting them via email. The administrator enters the email address and selects the level of access, and the system generates an email with a unique link to the registration page. Once the user completes registration, they are granted access to the company's platform.

This module saves time for administrators, ensures that each new user is given the appropriate level of access, and can be customized to meet the company's needs. By automating the account creation process, the module streamlines user management and reduces the risk of security breaches.

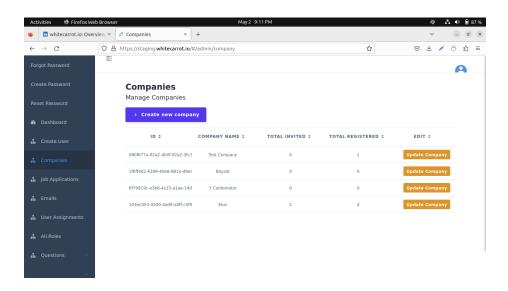


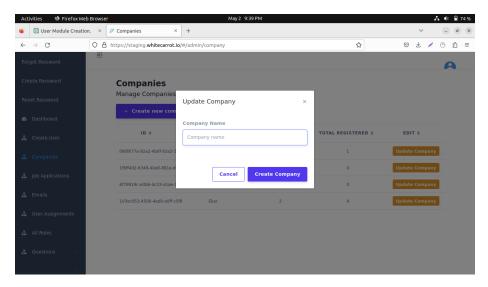
COMPANIES:

The Companies module is a feature that enables company administrators to manage their company information. With this module, the admin can create and update companies' details as needed.

To create a new company, the administrator would access the Companies module and fill out the necessary information, such as the company name, address, and contact information. Once the company has been created, the administrator can update the information as needed, such as adding new locations or updating the company's logo

The Companies module allows administrators to easily manage their company information in one central location, ensuring that the information is up-to-date and accurate. By having access to all company information, administrators can easily make informed decisions and ensure that the company's branding is consistent across all platforms.



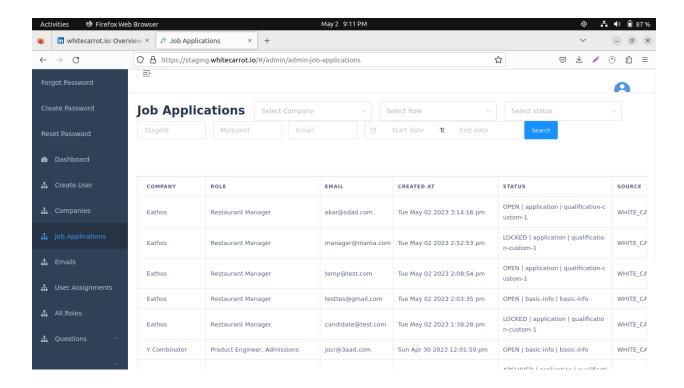


Job Applications:

The Job Applications module is a feature that allows company administrators to manage job applications received from potential candidates. With this module, the admin can easily track and organize job applications, ensuring that each application is reviewed and processed in a timely manner.

To use the module, the administrator would access the Job Applications feature and view a list of all received applications. The administrator can sort and filter the list to quickly find specific applications or search for applicants based on their qualifications. The administrator can also update the status of each application, such as "In Review" or "Interview Scheduled," to keep track of the progress.

The Job Applications module helps streamline the hiring process by providing a centralized location to manage all job applications. It also allows administrators to quickly and easily communicate with applicants, schedule interviews, and keep track of important deadlines. This module is especially beneficial for companies that receive a high volume of job applications, ensuring that each applicant receives a fair and efficient review process.

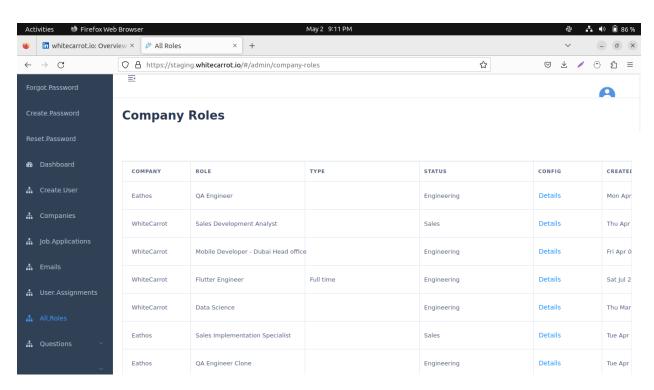


COMPANY ROLES:

The Company Roles module is a feature that enables company administrators to manage their company's job roles. With this module, the admin can easily view and manage job roles, including job title, type of role (full-time or part-time), department, and the date the role was created.

To use the module, the administrator would access the Company Roles feature and view a list of all job roles within the company. The administrator can add new roles, edit existing roles, and delete roles that are no longer needed. The module also allows administrators to assign employees to specific job roles, ensuring that each employee is properly classified and their roles are up-to-date.

The Company Roles module helps streamline human resources management by providing a centralized location to manage all job roles within the company. This ensures that each employee is correctly classified, and their roles are clearly defined. It also allows administrators to easily view the job roles within each department, ensuring that each department is adequately staffed with the necessary positions. Overall, this module helps companies to manage their human resources more efficiently, ensuring that the right people are in the right positions.

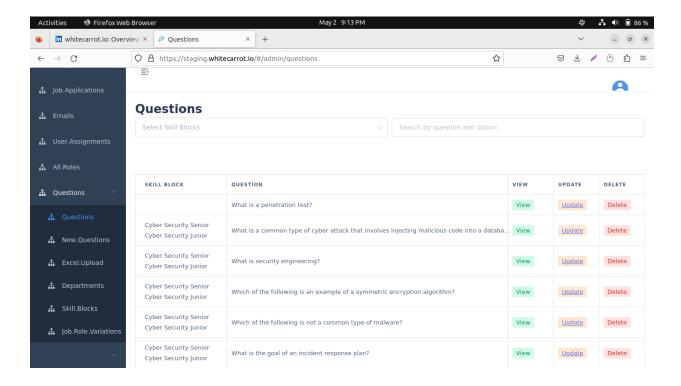


Questions:

The Questions module is a feature that displays all questions within a skill block, allowing administrators to easily manage and edit questions as needed. With this module, the admin can search for a specific question, preview the question, and delete or update the question.

To use the module, the administrator would access the Questions feature and view a list of all questions within a skill block. The administrator can search for a specific question using keywords or phrases. Once the desired question is located, the administrator can preview the question to ensure it is accurate and up-to-date. The administrator can also delete the question if it is no longer relevant or update the question to reflect any changes or improvements.

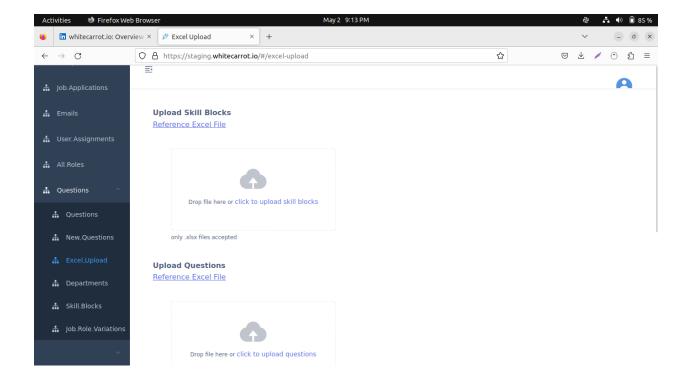
The Questions module helps streamline the content management process by providing a centralized location to manage all questions within a skill block. This ensures that each question is accurate and up-to-date, and it also allows administrators to quickly and easily make changes as needed. By having access to all questions within a skill block, administrators can easily ensure that each question aligns with the company's goals and objectives.



Excel Upload:

The Excel Upload module is a feature that allows administrators to upload skill blocks, job role variations, and questions directly from an Excel spreadsheet to the database. With this module, administrators can save time and reduce errors by uploading large amounts of data in a single batch.

To use the module, the administrator would access the Excel Upload feature and select the type of data they want to upload. The administrator would then select the Excel file that contains the data and upload it to the system. The module would then read the data from the spreadsheet and populate the appropriate tables within the database.

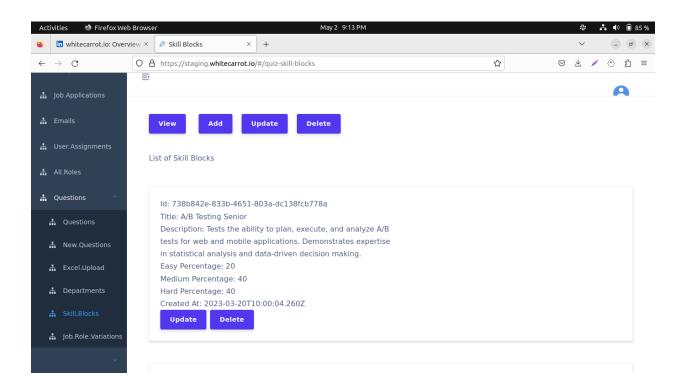


Skill Blocks:

The Skill Blocks module is a feature that displays a list of all skill blocks within the system. With this module, administrators can easily manage and edit skill blocks as needed. The module allows the admin to add new skill blocks, edit existing skill blocks, and delete skill blocks that are no longer needed.

To use the module, the administrator would access the Skill Blocks feature and view a list of all skill blocks. The administrator can add new skill blocks by providing a name and description for the new block. The administrator can also edit existing skill blocks by updating the name or description, and they can delete skill blocks that are no longer needed.

The Skill Blocks module helps streamline the content management process by providing a centralized location to manage all skill blocks within the system. This ensures that each skill block is accurate and up-to-date, and it also allows administrators to quickly and easily make changes as needed. By having access to all skill blocks, administrators can easily ensure that each skill block aligns with the company's goals and objectives. Overall, this module helps companies to manage their content more efficiently, ensuring that the right content is available to the right people.

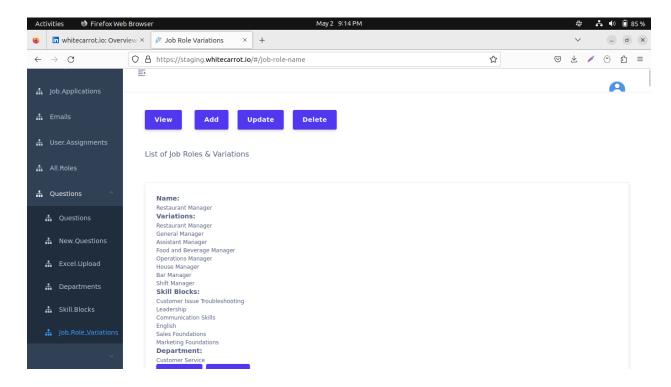


Job Roles & Variations:

The Job Roles & Variations module is a feature that displays a list of all job roles and their variations within the system. With this module, administrators can easily manage and edit job roles and their variations as needed. The module allows the admin to add new job roles, variations, edit existing job roles and variations, and delete job roles or variations that are no longer needed.

To use the module, the administrator would access the Job Roles & Variations feature and view a list of all job roles and their variations. The administrator can add new job roles or variations by providing a name and description. The administrator can also edit existing job roles or variations by updating the name or description, and they can delete job roles or variations that are no longer needed.

The Job Roles & Variations module helps streamline the human resources management process by providing a centralized location to manage all job roles and their variations within the system. This ensures that each job role and variation is accurate and up-to-date, and it also allows administrators to quickly and easily make changes as needed. By having access to all job roles and variations, administrators can easily ensure that each job role and variation aligns with the company's goals and objectives. Overall, this module helps companies to manage their human resources more efficiently, ensuring that the right people are in the right positions.



Company Recruiters Login:

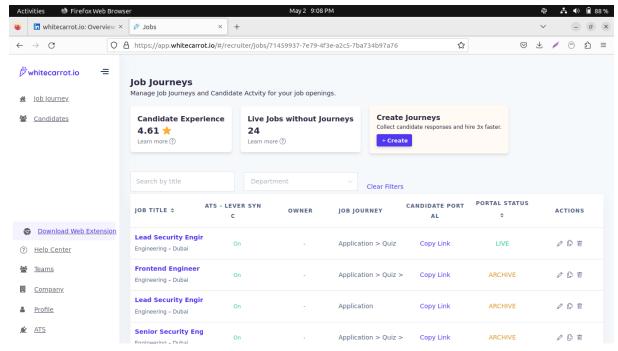
As a Company Recruiters, you will have access to certain modules and features that regular users do not have. If you login as Recruiter, you can access the following modules

JOB JOURNEYS:

The Job Journeys module is a feature that allows recruiters to manage job journeys and candidate activity for job openings. The module provides a dashboard that displays candidate activity for each job opening, allowing administrators to track candidate progress through the hiring process.

The module also provides a candidate experience feature, which allows candidates to view the status of their job applications and provides them with updates on their progress. This enhances the candidate experience and helps to keep them engaged throughout the hiring process.

In addition, the Create Journeys feature allows recruiters to create customized job journeys for each job opening, providing candidates with a personalized experience based on their qualifications and interests. This helps to ensure that each candidate has a positive experience throughout the hiring process.

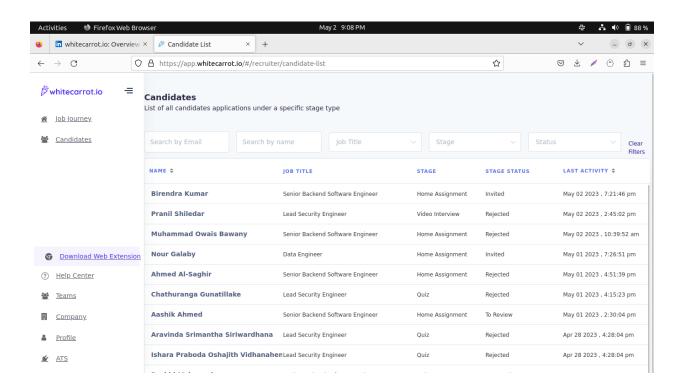


Candidates:

The Candidates module is a feature that displays a list of all candidates who have applied for job openings within the system. The module shows the candidate name, the job role they applied for, and the stage of the hiring process they are currently in (such as quiz, one-way interview, assignment, or interview).

In addition, the module shows the stage status for each candidate, indicating whether they have been accepted, rejected, archived, or are unresponsive. The stage status provides administrators with an at-a-glance view of the status of each candidate, allowing them to quickly identify which candidates are still being considered and which candidates have been eliminated from the hiring process.

Finally, the module shows the last activity for each candidate, indicating the most recent action taken by the administrator or the candidate. This helps to provide a clear and up-to-date view of the hiring process for each candidate, allowing administrators to make informed decisions about each candidate's suitability for the job opening.

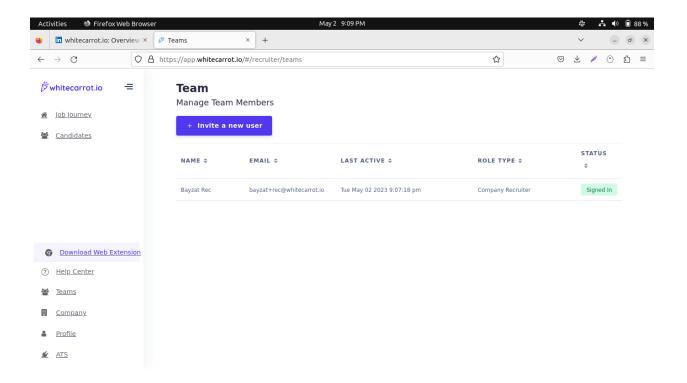


Teams:

The Team module is a feature that allows companies to manage their team members within the system. The module shows a list of all team members, including their name, invited email, role (such as Company Recruiter or Company Admin), and status (invited or signed in).

In addition, the module displays the last activity for each team member, indicating when they last accessed the system. This helps to provide administrators with an up-to-date view of their team's activity, allowing them to track their progress and ensure that everyone is staying engaged with the hiring process.

The Team module also allows administrators to easily invite new team members by providing their email address and assigning them a role within the system. This helps to streamline the onboarding process for new team members, ensuring that they have access to the tools and resources they need to be effective.

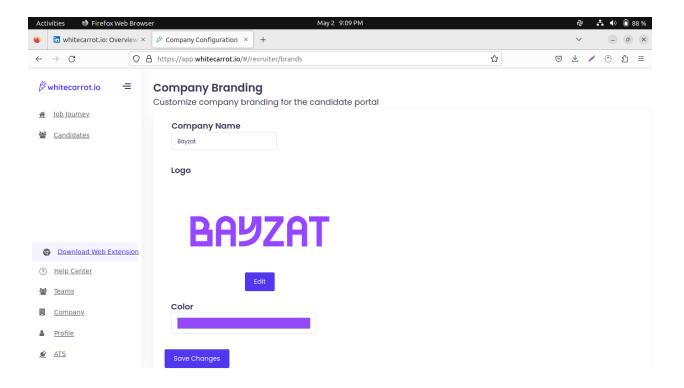


Company Branding:

The Company Branding module is a feature that allows companies to customize their branding for the candidate portal. The module provides the ability to upload a company logo, select a primary color scheme, and display the company name on the candidate portal.

By customizing the branding for the candidate portal, companies can create a more professional and consistent look and feel, which can help to attract and retain top talent. The logo and color scheme can be aligned with the company's overall branding strategy, which helps to reinforce the company's identity and values.

In addition, the module allows companies to display their company name on the candidate portal, providing candidates with a clear understanding of the company they are applying to. This helps to create a sense of trust and transparency, which can be critical in attracting and retaining top talent.



CONCLUSION

In conclusion, "White Carrot's Recruitment Intelligence Tool" has successfully tackled the challenges of the current job market by focusing on adaptability, data-driven decision making, candidate experience, and the ability to train and influence hiring managers. By developing a flexible system that adapts to the unique hiring needs of clients, leveraging data and analytics, providing a seamless candidate experience, and offering training and guidance to hiring managers, our platform has significantly reduced the time and resources required to make quality hires. Our innovative approach has resulted in impressive metrics such as reducing engineering team time spent per hire from 30 hours to 10 hours, reducing candidate wait time and time-to-hire for desirable candidates from 6 weeks to 3 weeks, improving the quality of shortlisted candidates by 50%, and reducing cost per hire. With our dedication to transforming the hiring process, we are proud to be at the forefront of innovation in the hiring space and look forward to continuing to help our clients make better hiring decisions. Our ultimate goal is to create a better world of work for all, where people have the opportunity to find joyful work and expand their zone of genius.

The Recruitment Intelligence platform aims to solve the problem of lengthy hiring processes and talent mobility. By matching candidates with jobs based on their zone of genius, the platform provides a solution that encourages talent mobility and helps individuals find joy in their work. The platform's features, including the job marketplace, freelance HR professional network, and freelance professional corporate coaches network, will provide users with the tools they need to succeed in their careers. The platform's development will follow a four-stage plan, with the aim of launching the product and marketing it to potential users and partners.

REFERENCES

https://nodejs.org/docs/latest-v16.x/api/

https://www.postgresql.org/docs/15/index.

html https://www.w3schools.com/sql/

boilerplate#features

https://tailwindui.com/

https://vuejs.org

https://docs.nestjs.com/

https://typeorm.io/

https://bootstrap-vue.org/

 $\underline{https://docs.nestjs.com/techniques/database}$