



Project Report/Seminar report On



SeeV: An innovative AI tool to step up your career game

Submitted in partial fulfillment of the requirements for the award of the degree of

Bachelor of Technology

in

Computer Science and Business Systems

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CERTIFICATE

*This is to certify that the project report/seminar report entitled "**See V:An innovative AI tool to step up your career game**" is a bonafide record of the work done by **Devika S(u2109025), Durga Ramaseshan(u2109026), Shruti Maria Shibu(u2109062)**, submitted to the Rajagiri School of Engineering & Technology (RSET) (Autonomous) in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology (B. Tech.) in "Computer Science and Business Systems" during the academic year 2021-2025.*

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ABSTRACT

In the contemporary landscape of intense job market competition, having a standout CV can be the key differentiator between success and obscurity. This revolutionary tool, Machine Learning (ML) algorithms, transcends conventional CV creation processes. Far beyond mere simplification, the tool seamlessly integrates a myriad of algorithms, offering users an effortless experience to input personal information, view job postings and generate meticulously crafted CVs.

The primary goal is to empower users in crafting truly professional CVs with personalized recommendations and targeted focus areas. This tool is meticulously engineered to save time while ensuring the highest quality output. Leveraging the integration of the employer role guarantees that CVs stay dynamic and current, by helping create a seamless interaction between the job providers and seekers.

The ML algorithms embedded within the system cover a spectrum of functionalities, including skill matching and predictive analysis. This comprehensive approach ensures accuracy in every CV, aligning user skills and experiences with industry demands seamlessly. The robust system is supported by diverse databases, including User Authentication, User Profile, User feedback, user skills, education history, experiences, courses taken as well as employer's job postings and user resumes.

To further enhance the user experience, a content management system is slated for integration. Beyond CV creation, this system provides invaluable insights on excelling in the professional sphere. Users gain access to job and internship suggestions, CV guidance, and a wealth of informative blogs, all conveniently accessible at their fingertips.

The technological backbone of this project involves Flutter for UI design, Firebase for the back-end, and Firestore for databases. This powerful combination ensures a seamless and responsive user interface coupled with a robust and scalable backend infrastructure.

Ultimately, this innovative tool empowers users to efficiently create compelling, industry-

specific CVs, elevating their professional narrative and unlocking new avenues for career advancement. It stands as a powerful ally, guiding individuals with confidence and distinction through the intricacies of today's highly competitive job market.

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List of Abbreviations

- CV -Curriculum Vitae
- ML - Machine Learning
- ATS - Applicant Tracking System
- ER - Entity Relationship diagram
- NLP - Natural Language Processing
- DFD - Data Flow Diagram

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Chapter 1

INTRODUCTION

In the rapidly evolving landscape of job markets, the importance of a professional well-crafted Curriculum Vitae is crucial. A CV is often the first impression a candidate makes on their potential employer. It acts as a medium for job seekers to showcase their skills, experiences and qualifications. Recognizing the significance of a CV, our project, SeeV: An innovative tool to step up your career game, transforms the CV creation process through ML algorithms.

1.1 BACKGROUND

The traditional process of crafting a CV can be time-consuming and daunting for many individuals. Job seekers often face challenges in identifying the most relevant information to include, structuring their CV's effectively, and tailoring it to meet specific job requirements. Furthermore, the lack of standardized formats and the dynamic nature of industry expectations makes it difficult for job seekers to keep their CV's up-to-date. In response to these challenges, the SeeV uses advanced Machine Learning algorithms aiming at making the whole CV generation process user-friendly and beneficial to its users.

1.2 PROBLEM DEFINITION

The cut throat competitive job market proves as a barrier to freshers and job seekers as most of them lack proper guidance to create a professional CV. Furthermore, the process of generating a CV is time-consuming and complex. Traditional methods of CV generation often result in poorly prioritized information and fail to meet the industry requirements. A CV is a key factor in every job seekers career game which is why it has to be precise and professional, helping the user stand out in the recruitment process. In today's automated world, CV's and resumes are sifted through on the basis of an ATS

machine. It simplifies the recruitment process by keeping certain criterias and selecting only the ones that are essential to their organisation. The ATS has several processes and rigid constraints that make it difficult for applicants to get through and thus making the recruitment process more difficult. Only eessential information needs to be added to the CV for it to be selected in this step and move one step closer to securing the user's desired job. Our objective is to simplify the CV creation process and to make ATS friendly CVs based on the criterias and requirements of the organisation.

1.3 SCOPE AND MOTIVATION

SCOPE

Our AI-powered CV builder boasts a comprehensive scope tailored for individuals striving to craft impactful resumes. It encompasses various facets, initiating with streamlined data entry mechanisms for efficient user information management. Leveraging string matching algorithms, it prioritizes information, ensuring key elements resonate effectively. The system dynamically adapts to evolving industry trends, guaranteeing relevance and adaptability across diverse professional backgrounds and industries.

Moreover, our project entails personalized recommendations, a pivotal feature addressing individual user needs. This inclusivity caters to users with varying professional backgrounds, ensuring that the generated resumes align specifically with industry standards and preferences.

Furthermore, the project extends its utility to employers as well. Through the platform, employers can seamlessly post job openings and review incoming job applications and resumes. This integration centralizes the job search process, offering a unified space for job availability while providing a structured format for resumes tailored to these opportunities. Such an ecosystem streamlines job searches for users, aligning available jobs directly with resumes created on the platform.

MOTIVATION

Our project's motivation resonates from a profound understanding of the myriad challenges that job seekers grapple with in today's fiercely competitive job market. We've personally witnessed the tediousness of the traditional CV creation process – it's often

an uphill battle, time-consuming, and lacks the personal touch needed to truly stand out. That frustration is something we've experienced ourselves, which sparked our passion to reimagine this process.

We're driven by a deep desire to transform this landscape, offering individuals like us a tool that not only saves invaluable time and effort but also significantly elevates the quality and relevance of their CVs. This journey is more than just crafting resumes; it's about empowering each user to present their professional story in the most compelling and impactful way possible.

Our core mission is to be the guiding force behind users' career aspirations, enhancing their employability, and shaping their career trajectories positively. Beyond just providing a service, we aim to be a trusted companion on their professional journey, offering support, guidance, and a platform that simplifies the often daunting process of securing the right job.

Moreover, integrating employer roles within our system is a testament to our commitment to simplifying the job search process. By creating a seamless interaction between job seekers and potential employers, we strive to foster an environment where both sides can connect effortlessly, creating meaningful professional opportunities.

1.4 OBJECTIVES

- Efficiency: Streamline the CV creation process to save users time and effort.
- Personalization: Develop a tailored CV, based on the demands of the job chosen by the user.
- Intelligence: Implement ML algorithms to analyze and understand the significance of user-provided information, ensuring the generated CVs are not only accurate but also impactful.
- Accessibility: Create a user-friendly interface that caters to individuals with varying levels of technological proficiency.
- Quality improvement: Enhance the quality and efficiency of the generated CVs to increase ser employability.

- Integration of employer roles: Bridges the gap between job seekers and providers for a seamless recruitment process.
- Feedback: User feedbacks for continuous improvisation

1.5 CHALLENGES

The development and smooth implementation of SeeV faces several challenges. The most challenging factor being the dynamic nature of the job market.

- Adapting the system to evolving industry standards and trends requires constant updates and monitoring to stay relevant in the ever changing job markets.
- Ensuring that the ML algorithms used are free from biases that could result in unfair advantages and disadvantages for certain demographic groups.
- Gaining user trust in the accuracy and reliability of the SeeV, as users must feel confident that the system will represent their professional identity accurately.
- Data accuracy while handling diverse data sources and maintaining their quality is difficult.
- Continuous improvements are required based on user feedback.

1.6 ASSUMPTIONS

The SeeV takes on certain assumptions that guide the design and functionality of the system like:

- Assumes that the user provides accurate and truthful information during the input process.
- Assumes that the ML algorithm used are fair and unbiased to provide equitable outcomes for users.
- Assumes that the algorithm used correctly interprets and prioritizes information to align with industry standards and demands.

1.7 SOCIETAL/INDUSTRIAL RELEVANCE

The system's impact on the hiring process extends beyond providing a streamlined experience for employers; it fundamentally transforms the way employers approach candidate evaluation. By offering standardized and well-organized CVs, the system enables employers to shift their focus from navigating through inconsistent resumes to objectively assessing the qualifications, skills, and experiences of candidates. This shift towards objective evaluation contributes to a fairer recruitment process, reducing the likelihood of unconscious biases influencing hiring decisions.

One notable advantage for employers is the significant time efficiency gained through the system. The traditionally time-consuming task of reviewing diverse resumes is streamlined, allowing employers to allocate more time to strategic aspects of recruitment. This includes conducting in-depth interviews, evaluating cultural fit, and making informed decisions that align with the organization's long-term goals. The system's emphasis on reducing time-to-hire not only improves efficiency but also enhances the overall productivity of the hiring team.

Moreover, the system plays a pivotal role in mitigating biases that may arise from poorly formatted or unclear resumes. Employers benefit from a standardized format that ensures a consistent and unbiased evaluation of candidates, regardless of the presentation style or demographic information. This contributes to creating a more inclusive workplace by enabling employers to make decisions based purely on merit.

The adaptability of the system to industry trends is another significant advantage for employers. CVs generated by the system reflect the latest skills and qualifications, ensuring that employers receive applications that align with current industry requirements. This dynamic adaptation minimizes the gap between employer expectations and candidate profiles, facilitating a more efficient and informed hiring decision-making process.

Furthermore, the system's positive impact on productivity extends to the overall candidate experience. By providing a clear and standardized application process, employers enhance the experience for candidates, even those who may not be selected. This positive interaction contributes to improved employer branding, encouraging candidates to view the company favorably and potentially become advocates for the organization.

In conclusion, the system's influence on the employer's role goes beyond mere efficiency

gains. It introduces a transformative shift towards fairness, objectivity, and adaptability in the hiring process. Employers benefit from streamlined workflows, reduced biases, and a more comprehensive understanding of candidate qualifications, ultimately contributing to a more effective and equitable recruitment strategy.

1.8 ORGANIZATION OF REPORT

- Chapter 1 provides an overview of SeeV, outlining its genesis, goals, and key motivations. It delves into the project's scope, defining the parameters within which the AI-powered CV builder operates. Moreover, it articulates the challenges encountered in the conventional CV creation process and highlights how SeeV aims to address these issues. It also sheds light on the project's significance within the industry and society, setting the stage for subsequent chapters.
- Chapter 2 delves into a comprehensive review of existing systems and technologies related to CV creation and job search platforms. It scrutinizes the strengths and weaknesses of current methodologies, providing insights into the technological landscape surrounding CV building. Additionally, it outlines the chosen methodologies, technologies, and tools employed in the development of SeeV, justifying their selection based on their relevance and efficacy.
- Chapter 3 presents a detailed exploration of SeeV's system architecture. It dissects the various components, modules, and their interconnections within the system. Furthermore, it elucidates the rationale behind the chosen architecture, aligning it with the project's overarching objectives and requirements. This chapter essentially serves as a blueprint, elucidating the structural foundation of SeeV.
- Chapter 4 discusses both hardware and software requirements for SeeV. It delineates the specific hardware components and the software stack needed to support SeeV's functionality. Moreover, it explicates how the chosen hardware and software configurations cater to the project's unique needs, ensuring seamless operations and optimal performance.
- Chapter 5 offers a detailed insight into the design process adopted for SeeV. It explicates the chosen design and modeling techniques employed, encompassing Data

Flow Diagrams (DFD), Entity-Relationship Diagrams (ER Diagram), and a suite of UML diagrams. These visual representations elucidate the project's design intricacies and functionalities, providing a comprehensive overview.

- Chapter 6 evaluates the outcomes achieved by SeeV, comparing them against the anticipated results. It conducts an in-depth analysis of the project's strengths and areas that may require improvement. By discussing the achieved results, this chapter offers valuable insights for future enhancements and iterations.
- Chapter 7 encapsulates the key findings derived from the project's outcomes. It delineates the implications of SeeV within the industry and provides actionable recommendations for future endeavors. This chapter acts as a comprehensive conclusion, summarizing the project's impact and charting potential directions for further development.
- Chapter 8 lists all the references utilized throughout the report, ensuring proper citation and acknowledgment of external contributions.
- Appendix-1 shows all screenshots of backend and databases.
- Appendix-2 comprises presentation slides utilized during discussions related to the SeeV project. These slides offer visual support to complement the textual content presented in the report.
- Appendix-3 provides an overview of the institution's and department's vision, mission, course outcomes, program outcomes, and their alignment with the SeeV project, offering additional contextual information.

Chapter 2

Literature Survey

2.1 ZETY

Zety is an online platform that provides tools for creating professional resumes and cover letters. It is a popular CV builder known for its user-friendly interface and a range of features aimed at simplifying the CV creation process.

2.1.1 FEATURES

- Multiple CV templates: The platform provides a diverse range of professionally designed templates suitable for different industries and job roles. Users can choose a template that aligns with their preferences and the nature of their work.
- Pre-written content suggestions: Zety offers pre-written content suggestions for various sections of the CV, including skills, work experience, and education. This feature can be helpful for users who are unsure about what information to include.
- Cover letter builder: In addition to CV building, Zety provides tools for creating professional cover letters, resumes. Users can tailor their cover letters to specific job applications.
- Spell-check and formatting tools: Zety includes spell-check and grammar-check features to ensure that CVs, resumes and cover letters are free of errors.

2.1.2 LIMITATIONS

:

- Limited customization options for free users: Users may find limitations in customizing certain elements of templates, which could impact the level of personalization.

- Industry-Specific template suitability: Some users might find that certain templates are better suited to specific industries or job roles, limiting the universal applicability of all templates.
- Limited Free Access: While Zety offers free access, certain features and templates may be restricted, and users may need to subscribe to a premium plan for full access.
- Dependency on Zety Branding: Free users may have Zety branding on their products, and removing it might require a premium subscription.

2.2 RESUMEGENIUS

ResumeGenius is also another online platform that provides tools for creating professional CVs, resumes and cover letters. Their point of attraction is how they introduce the whole CV generation process in 3 steps(Use AI to write the CV,Pick a template, download it). It is a popular CV builder known for its user-friendly interface and a range of features aimed at simplifying the CV creation process. The website also provides a platform for users to read blogs related to career guidance, CV building and other related topics.

2.2.1 FEATURES

- Pre-Written Bullet Points: The platform offers pre-written bullet points and content suggestions for describing work experience, skills, and achievements. This feature can be helpful for users who need assistance with content creation.
- Customization Options: Users can customize the content and appearance of their resumes, ensuring that the final document reflects their individual strengths and qualifications.
- Job Search Resources: Some versions of ResumeGenius provide additional resources, such as job search tips, interview guidance, and career advice.

2.2.2 LIMITATIONS

- Dependency on Internet Connection: As an online platform, ResumeGenius requires a stable internet connection to access and use the service. This could be a limitation for users in areas with poor connectivity.
- Compatibility Issues: Users may encounter compatibility issues when exporting resumes to different file formats or when importing from other platforms.
- Dependency on ResumeGenius Branding: Free users may have ResumeGenius branding on their resumes, and removing it might require a premium subscription.

2.3 CANVA

Canva is a web-based graphic design platform that allows users to create a wide range of visual content, including CVs, resumes, presentations, social media graphics, posters, flyers, and more. Canva is well known for its user-friendly interface, extensive library of design elements, and collaborative features.

2.3.1 FEATURES

- Design Templates: Canva provides a vast collection of professionally designed templates for the CV generation process and other documents also, making it easy for users to create visually appealing content without starting from scratch.
- User-Friendly Drag-and-Drop Interface: The platform features an intuitive drag-and-drop interface, allowing users to easily customize designs by adding text, images, icons, and other elements.
- Collaborative Tools: Canva supports collaboration, allowing multiple users to work on the same design in real-time. This feature is particularly useful for team projects, presentations, or group assignments.
- Mobile Apps: Canva is available not only as a web-based platform but also as mobile apps for iOS and Android, allowing users to create and edit designs on the go.

2.3.2 LIMITATIONS

- Watermark on Free Versions: Designs created in the free version may have a Canva watermark, which can be removed by upgrading to Canva Pro.
- Dependency on Internet Connection: Canva operates as a web-based platform, and a stable internet connection is required to create, edit, and access designs.
- Storage Limits: There may be storage limitations for free users. Canva Pro users typically have access to more storage space for their designs.

2.4 GENERAL LIMITATIONS FOR A CV BUILDER

- Watermarks or Branding: Free versions of CV builders may include watermarks or branding on the final document. Users may need to upgrade to a premium plan to remove these markings.
- Limited Export Formats: Free plans may have restrictions on the formats in which users can export their CVs. Premium plans might offer additional options for exporting in various file formats.
- Content Suggestions and Constraints: While some CV builders offer content suggestions and pre-written phrases, these suggestions may not be suitable for all industries or roles. Users may need to modify or write their own content.
- Dependency on Internet Connection: Online CV builders generally require an internet connection. Users may face limitations if they need to access or modify their CVs offline.
- Privacy and Security Concerns: Users should be cautious about the privacy and security of their personal information when using online platforms. Checking the platform's privacy policy and security measures is important.
- Limited Advanced Features for Free Users: Advanced features such as analytics, collaboration tools, or premium content may be reserved for users with paid subscriptions.
- File Size Limits: There may be restrictions on the file size of the exported CV, potentially limiting the inclusion of high-resolution images or large amounts of content.

2.5 SUMMARY

The field of AI-powered CV builders has witnessed substantial growth as organizations and individuals seek efficient and innovative solutions for crafting compelling resumes. The literature survey conducted revealed the overarching trend of integrating artificial intelligence, natural language processing, and machine learning to enhance the CV creation process. Zety, with its intuitive drag-and-drop editor and multiple templates, excels in user-friendliness, yet faces limitations in customization for free users. ResumeGenius stands out for its step-by-step approach and pre-written content, but accessibility to certain features is restricted behind a paywall. Canva, known for its wide range of design templates and collaborative features, balances functionality with a more design-focused approach. General limitations across these platforms and CV builders in general include constraints on template variety, branding on free versions, and dependency on internet connectivity. As the industry strives to address these limitations, recommendations are made for a stronger focus on template variety, enhanced customization options, and robust data security measures.

Chapter 3

SYSTEM ARCHITECTURE

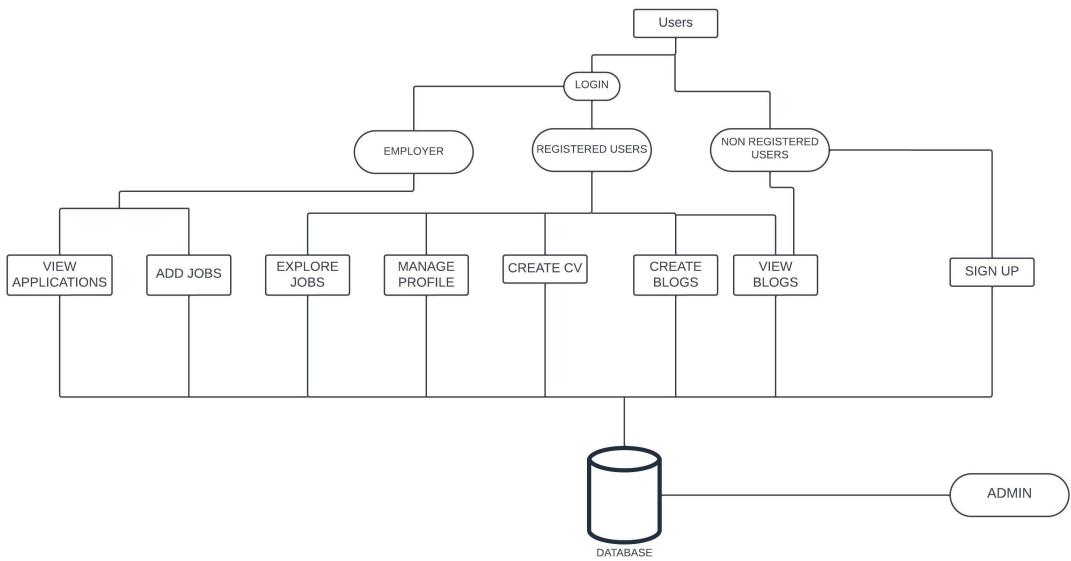


Figure 3.1: System Architecture diagram

SeeV, our platform, caters to three distinct user categories - registered users, non-registered users, and employers. Admin access to Firestore collections ensures database management without direct interaction with the website. Registered users wield a suite of functionalities, including CV generation, blog creation, job exploration, feedback submission, profile updates, and access to website analytics.

Non-registered users, while capable of perusing blogs uploaded by others, require signup for broader access. Upon registration, users opt either as a registered user (job seeker) or an employer (job provider). Employers, once registered, can post job openings, review incoming applications, and align user inputs with specific job description templates. Leveraging machine learning, the platform offers suggestions to enhance CVs in line with job requirements.

Moreover, SeeV streamlines the job application process. Users can seamlessly explore employment opportunities and submit applications within the platform, streamlining and expediting the overall process, thus optimizing time expenditure.

Figure 3.1 visually represents the dynamic interaction between the system's database and its diverse user base. The illustration encapsulates the essence of user engagement and highlights the functionalities accessible to different user categories within the SeeV system.

Primarily, the figure showcases the three distinct user types—registered users, employers, and non-registered users—depicted as nodes or entities in the diagram. These entities are interconnected with the system's database through various pathways, indicating their interaction and engagement with different system functionalities.

The registered users, identified within the system, possess the privilege of accessing multiple functionalities seamlessly. Upon logging in, they gain access to a spectrum of tools and features, including profile updation, creating and viewing blogs, exploring job opportunities, and generating personalized CVs tailored to their preferences and industry demands. This user category experiences a comprehensive engagement with the system, leveraging its multifaceted utilities to enhance their job-seeking experience.

Employers, another integral user category, are depicted in the diagram with access to specific functionalities within the system. They possess the capability to post job positions, fostering opportunities within the platform, while also gaining access to review applications from prospective candidates. This interaction allows employers to actively engage with job seekers and streamline their recruitment process efficiently within the SeeV ecosystem.

Non-registered users, denoted in the diagram, are users who have not yet created an account within the system. Despite their status, they have limited access to functionalities. However, they are provided with the option to sign up and gain access to the entire suite of system functionalities. Meanwhile, even as non-registered users, they have the privilege to view blogs, offering them a glimpse of the platform's content and possibilities, thereby incentivizing them to sign up and engage further.

As can be seen, the admin can directly access the database through firebase without accessing the website.

Overall, Figure 3.1 serves as a comprehensive representation of the diverse user inter-

actions within SeeV. It visually encapsulates the inclusive nature of the platform, offering tailored functionalities to different user categories and encouraging active engagement, whether through exploration, creation, or recruitment, within the system's multifaceted environment.

Chapter 4

REQUIREMENTS

The successful implementation of SeeV depends on the requirements mentioned below.

4.0.1 HARDWARE REQUIREMENTS

The selection of hardware configuration is a very important task in software development. If not chosen correctly it may adversely affect the speed and then the efficiency of the entire system. The hardware requirements for the system are given below.

1. CPU: i3 Processor or above
2. Memory: 170 MB
3. Cache: 723KB
4. Floppy Disk. :1.44MB
5. HardDisk:4.5GB
6. Display:15” Monitor
7. Keyboard: Standard108keysEnhancedKeyBoard
8. Mouse: MSSerialMouse

4.0.2 SOFTWARE REQUIREMENTS

The software requirements for the system are mentioned below.

1. Operating System: WindowsXP,7 or above
2. Front End Tool: Flutter 3.16.5
3. Back End Tool: FIREBASE 13.0.2
4. Database: FIRESTORE 13.0.2
5. IDE: VISUAL STUDIO CODE 6. Hosting: Git version 2.40.0.windows.1 7. Other tools: Dart 3.2.3, DevTools 2.28.4

Chapter 5

DESIGN AND MODELING

The proposed system is an AI powered CV builder which allows its users to create their CVs with templates of their choice and allows other features like career exploration, course exploration and blogs related to career guidance and CV building. The UML diagrams below will help understand the system and its working much better.

5.1 DATABASE DESIGN

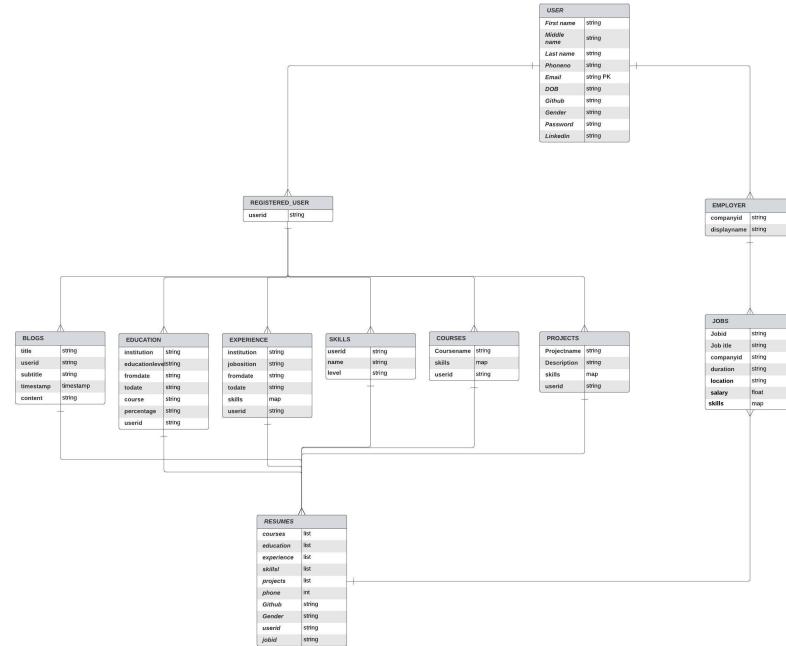


Figure 5.1: Figure shows the database design of the system.

The database design for SeeV, our comprehensive professional platform, encompasses a set of interconnected databases to manage various facets of users' professional profiles and interactions within the system. The Projects Database contains details about user projects, outlining project names, descriptions, timelines, and associated users. Skills are

meticulously recorded in the Skills Database, specifying skill names, proficiency levels, and user-skill associations. Work experience information, such as employment history, positions held, companies worked for, and associated skills, is stored in the Experience Database. Educational qualifications, degrees, institutions, and academic achievements are managed within the Education Database. Additionally, the Courses Database stores data about additional certifications or courses undertaken by users.

The Users Database serves as the hub for user authentication details, personal information, contact data, and preferences. Jobs available on the platform, including job titles, descriptions, requirements, and deadlines, are cataloged in the Jobs Database. Generated resumes tailored to users' preferences and job applications are maintained in the Resumes Database, allowing for easy access and submission. User feedback, reviews, and platform interactions are tracked in the Feedback Database, offering insights for system enhancements. Finally, the Blogs Database houses user-generated content in the form of blogs, cataloging titles, content, and timestamps.

This interconnected database structure ensures comprehensive management of user profiles, experiences, and interactions within SeeV. The design optimizes data retrieval, enabling efficient user experiences, seamless job matching, and platform functionality while facilitating continual system improvement based on user feedback and evolving industry trends.

5.2 DATA FLOW DIAGRAM

A Data Flow diagram for an AI powered CV builder illustrates the flow of data between various components of the system. It shows how data flows between the two sets of users of SeeV, giving a better understanding of the working of the application.

5.3 LEVEL 0 DFD

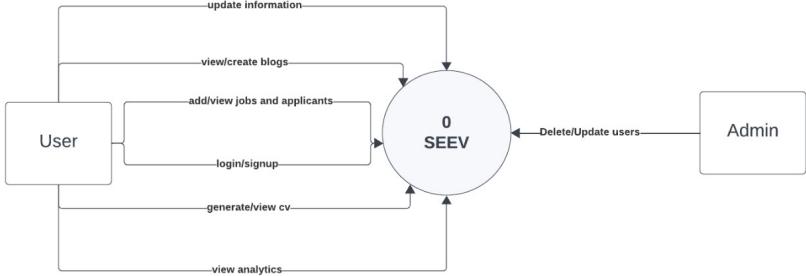


Figure 5.2: Level 0 DFD

The Level 0 Data Flow Diagram (DFD) serves as a foundational representation of SeeV's core functionalities, depicting interactions between the system and its users, data storage, and external interfaces. At this high level, it outlines major processes without delving into the intricate details of internal operations.

The diagram showcases a clear outline of the primary entities involved in SeeV's ecosystem. It encapsulates various user categories, including registered users, non-registered users, and employers, illustrating their interactions with the system. These interactions encompass critical functionalities such as user authentication, CV generation, blog creation and browsing, job exploration and application features, and specialized tools tailored for employers to manage job postings and review applicants.

At the core of this representation lies the database, the central repository storing user profiles, CV data, job postings, and essential information integral to SeeV's operations. Moreover, the diagram hints at potential integrations with external job platforms, enhancing SeeV's offerings by providing an extensive range of job opportunities.

The depicted data flows illustrate the exchange of information between users and the system, encompassing user inputs, processed CV data, and the flow of job-related information. These exchanges are fundamental to SeeV's seamless operation, ensuring the efficient handling and processing of user-provided data to generate personalized and impactful CVs.

In essence, this Level 0 DFD serves as a fundamental blueprint, offering a bird's-eye view of SeeV's core functionalities and the interactions between its key components,

guiding a comprehensive understanding of the system's operations and interactions with external entities.

5.4 LEVEL 1 DFD

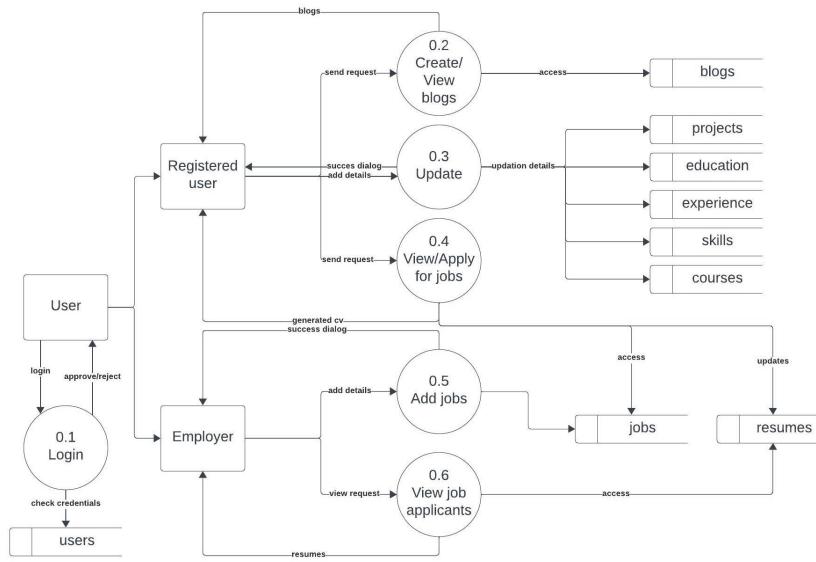


Figure 5.3: Level 1 DFD

The Level 1 Data Flow Diagram (DFD) further details the primary processes outlined in the Level 0 DFD, focusing on the core functionalities of SeeV, delineating the specific interactions and data flows within each major process.

Starting with 0.1, the login/signup process encapsulates the interactions between users and the authentication system. This process involves user authentication, allowing registered users to access their accounts while enabling new users to sign up by providing necessary details, ensuring a seamless onboarding experience.

Moving to 0.2, the create/view blogs process encompasses functionalities related to blog management. Users interact with SeeV to create, publish, and browse blogs. This process handles the creation and retrieval of blog content, facilitating a platform for users to share insights, experiences, and knowledge relevant to career growth.

Next, 0.3 involves the update process, where registered users can modify and enhance their profiles. This includes updating personal information, experiences, skills, and other relevant details that contribute to generating personalized CVs.

Transitioning to 0.4, users engage in the view/apply for jobs process, which enables them to explore available job opportunities and submit applications directly through SeeV. This process manages the interaction between users and the job listings, facilitating seamless job exploration and application.

Moving forward, 0.5 covers the process of adding jobs, specifically tailored for employers. It allows employers to post job listings, providing details about available positions and requirements.

Finally, 0.6 involves viewing applicants, facilitating employer interaction with job applications received through SeeV. Employers can review submitted applications, allowing for efficient candidate management and selection.

Each process delineated in the Level 1 DFD illustrates specific user-system interactions and data flows, highlighting the key functionalities within SeeV that cater to diverse user needs while enabling seamless user experiences and interactions.

5.5 LEVEL 2 DFD

The Level 2 Data Flow Diagram (DFD) provides a more detailed breakdown of the Level 1 processes, specifying the subprocesses and data sources involved within each major function.

Beginning with 2.1, the subprocesses 0.2.1 and 0.2.2 relate to blog management within SeeV. Users interact with the blogs database by either viewing existing blogs (0.2.1) or creating new ones (0.2.2). The viewing process enables users to access and read blogs hosted on the platform, while the creation process involves inputting content for new blog entries.

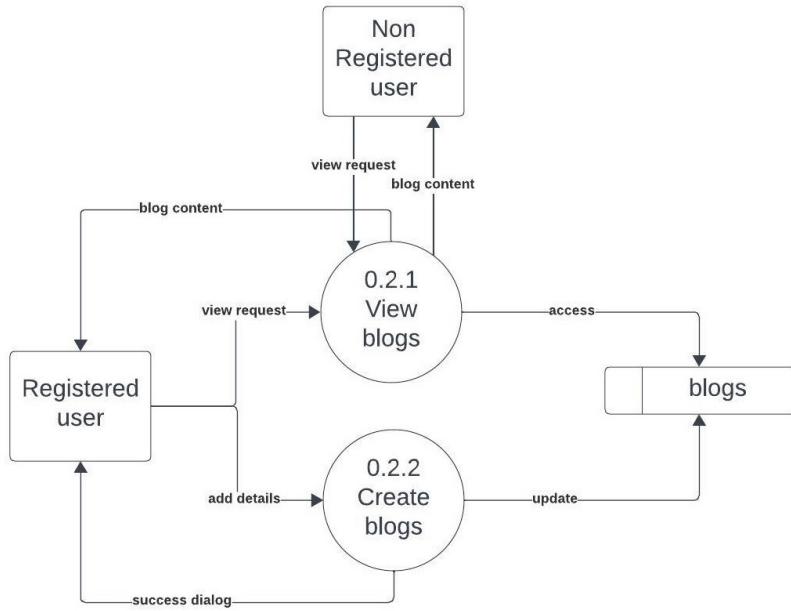


Figure 5.4: DFD Level 2.1

Moving to 2.2, the update process (0.3) encompasses various subprocesses, each tied to specific databases. Users engage in updating different sections of their profiles:

0.3.1 involves updating projects in the projects database, allowing users to add or modify their project-related information. 0.3.2 manages the update of educational details within the education database, enabling users to edit their academic information. 0.3.3 facilitates updating work experiences in the experiences database, allowing users to add or edit their professional experiences. 0.3.4 handles the update of skills within the skills database, allowing users to manage their skill sets. 0.3.5 involves updating courses information in the courses database, enabling users to add or modify courses they've completed or are undertaking. 0.3.6 pertains to the update of personal details in the users database, allowing users to manage their profile information like contact details, bio, etc.

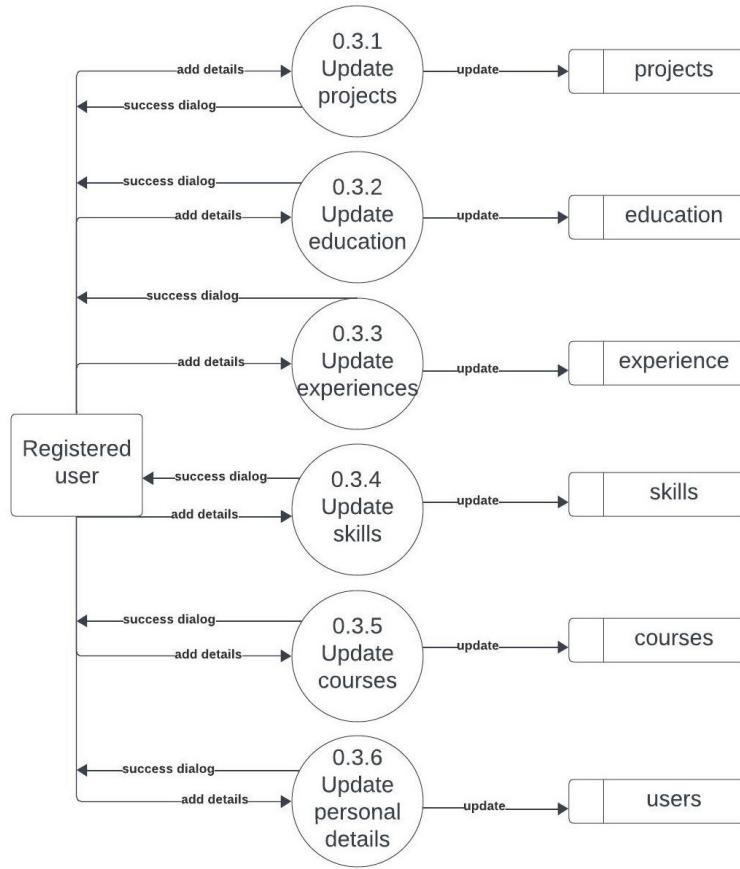


Figure 5.5: DFD Level 2.2

Finally, 2.3 outlines processes related to job management and resume handling:

0.4.1 involves viewing available jobs sourced from the jobs database, allowing users to explore different job listings. 0.4.2 enables users to apply for jobs by submitting their resumes to the resumes database, managing the job application process. 0.4.3 facilitates the viewing of generated CVs stored in the resumes database, allowing users to access and review their resumes. Each subprocess delineated in the Level 2 DFD specifies the discrete interactions users have with different databases and functionalities within SeeV, offering a more granular understanding of the system's operations and data flow.

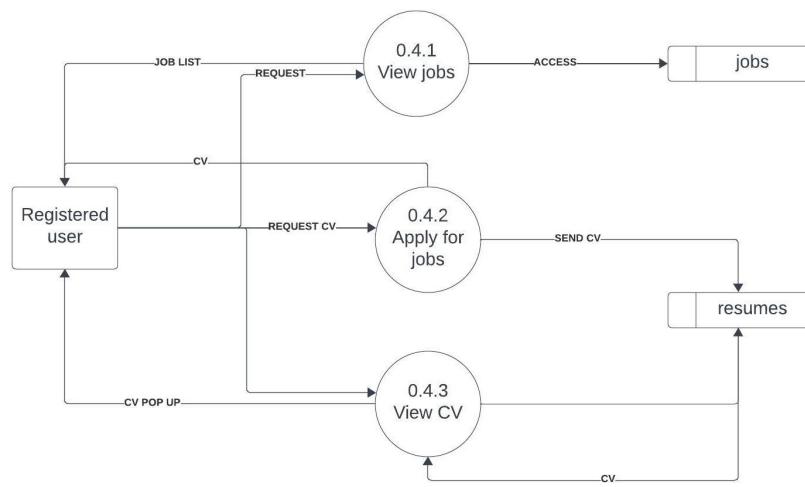


Figure 5.6: DFD Level 2.3

5.6 USE CASE DIAGRAM

The application allows three types of users: registered users (job seekers), employers and non registered users. The non-registered users can sign up and also view blogs related to career exploration and CV building uploaded by different users. The registered users can log in using their credentials and once signed in the user has access to multiple features. These features include creating CVs, updating their profile, creating new blogs and viewing blogs by other users, exploring job opportunities and additional courses that they can take on. The employer can login with his/her credentials and add job opportunities into the website. Job seekers can view these offers and apply for it and the employer can view these applications.

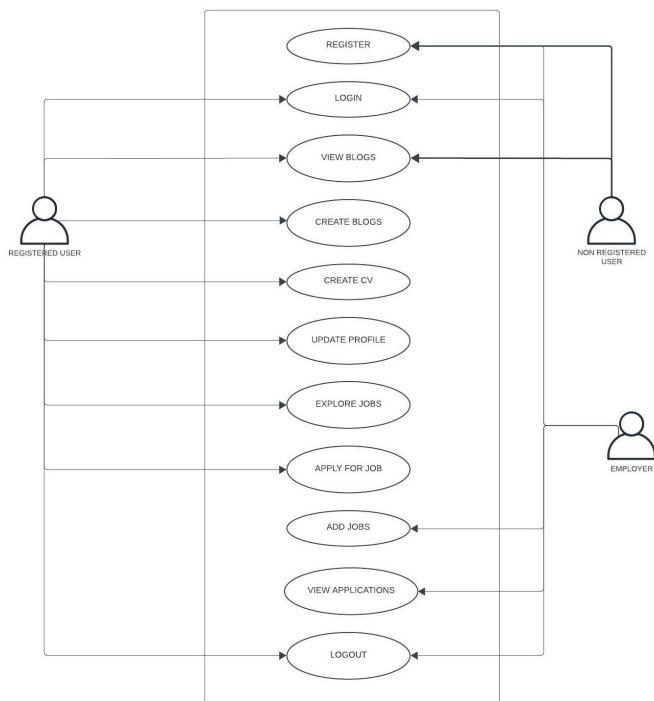


Figure 5.7: Use Case Diagram

5.7 ER DIAGRAM

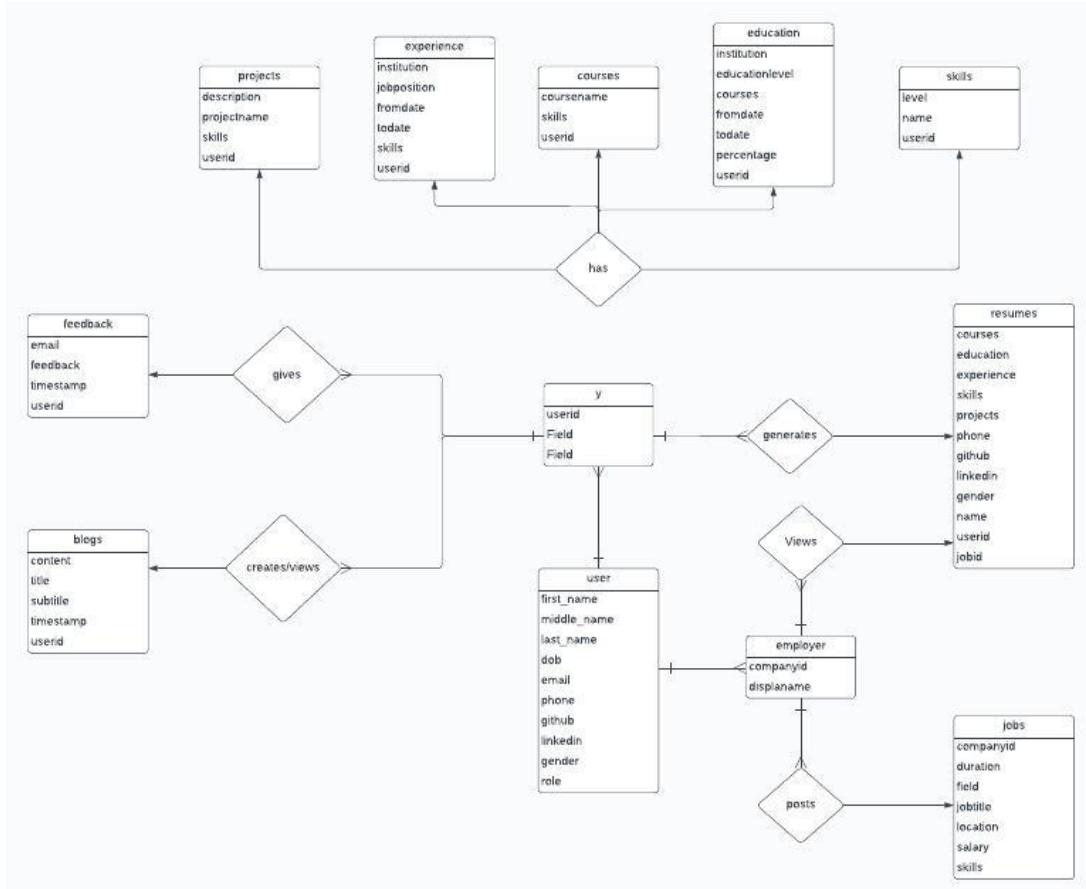


Figure 5.8: ER diagram

There are three types of users: registered users(job seekers), employers and non registered users. The registered users can log in through their email(user id) and password. If they havent registered yet, the can do so by specifying their name,email and by setting a password. The registered users will have to specify details like their firstname, middlename, lastname, phone number, age, date of birth and their email id. Then for creating their profile they will have to specify details like their educational qualifications,previous experiences, skills, projects undertaken and received certifications. They can explore job opportunities in sectors they are interested in and even approach the company through the link provided. Users can write and view blogs by specifying their author id, title and content if they are writing and view them without any procedures. For users in order to sign up as employers, they will have to specify details like

5.8 CLASS DIAGRAM

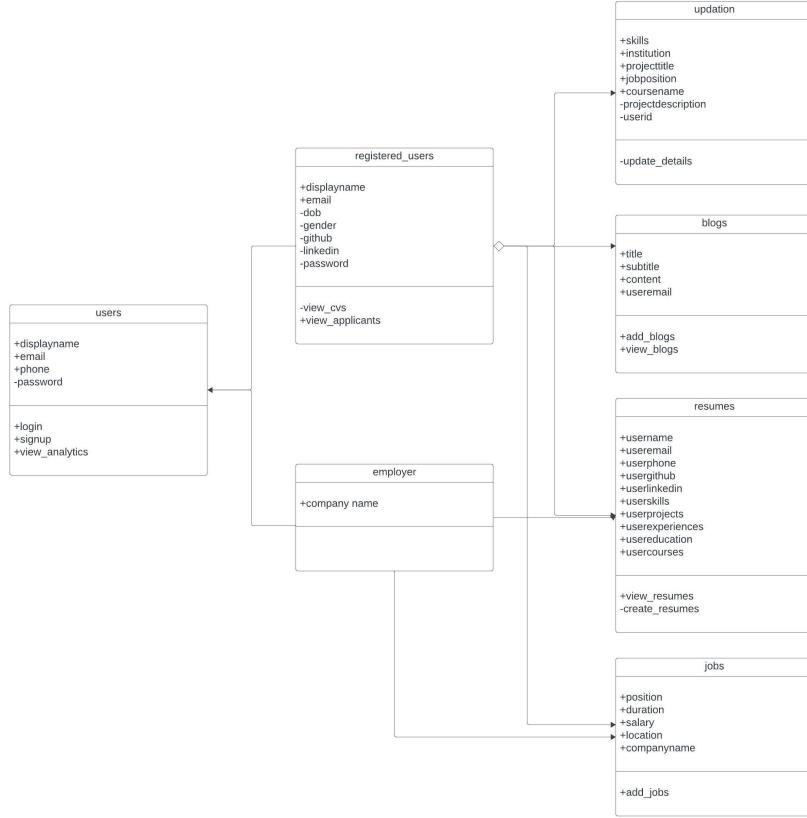


Figure 5.9: Class Diagram

The class diagram for SeeV represents the various entities and their relationships within the system, outlining the key classes and their interactions.

Users (Registered and Employers):

Registered Users: This class encompasses the attributes and functionalities associated with registered users. It includes attributes such as user ID, name, email, password, and contact information. Methods within this class manage user authentication, profile updates, blog creation, resume generation, job application submissions, and feedback provision.

Employers: This class represents the entities registered as employers. It contains attributes similar to registered users, along with additional details like company information, job postings, and applicant management. Methods associated with this class include job posting, applicant review, and interaction with job-related functionalities.

Updation: This class encapsulates functionalities related to user profile updates. It includes

This class encloses functionalities related to user profile updates. It includes

methods and attributes for modifying user details, managing changes to experiences, skills, personal information, and any other relevant data stored within user profiles. Blogs:

The Blogs class contains attributes and methods for managing blog-related activities. Attributes may include blog ID, author details, content, timestamps, and interactions (likes, comments). Methods within this class handle blog creation, retrieval, editing, and deletion, ensuring seamless management and accessibility of blog content. Resumes:

This class represents the functionalities associated with resume generation and management. It includes attributes like resume ID, user details, job preferences, skills, experiences, and personalized recommendations. Methods manage the generation, storage, retrieval, and customization of resumes based on user inputs and industry trends. Jobs:

The Jobs class encapsulates functionalities related to job postings and applications. It contains attributes such as job ID, employer details, job descriptions, requirements, and application status. Methods facilitate job posting, application submission, viewing available job listings, and managing applications for both users and employers. Each class within the diagram represents an entity or a set of functionalities within the SeeV system. The relationships between these classes depict interactions, dependencies, and the flow of data and actions within the system, ensuring smooth operations and interactions among different components of the application.

5.9 ACTIVITY DIAGRAM

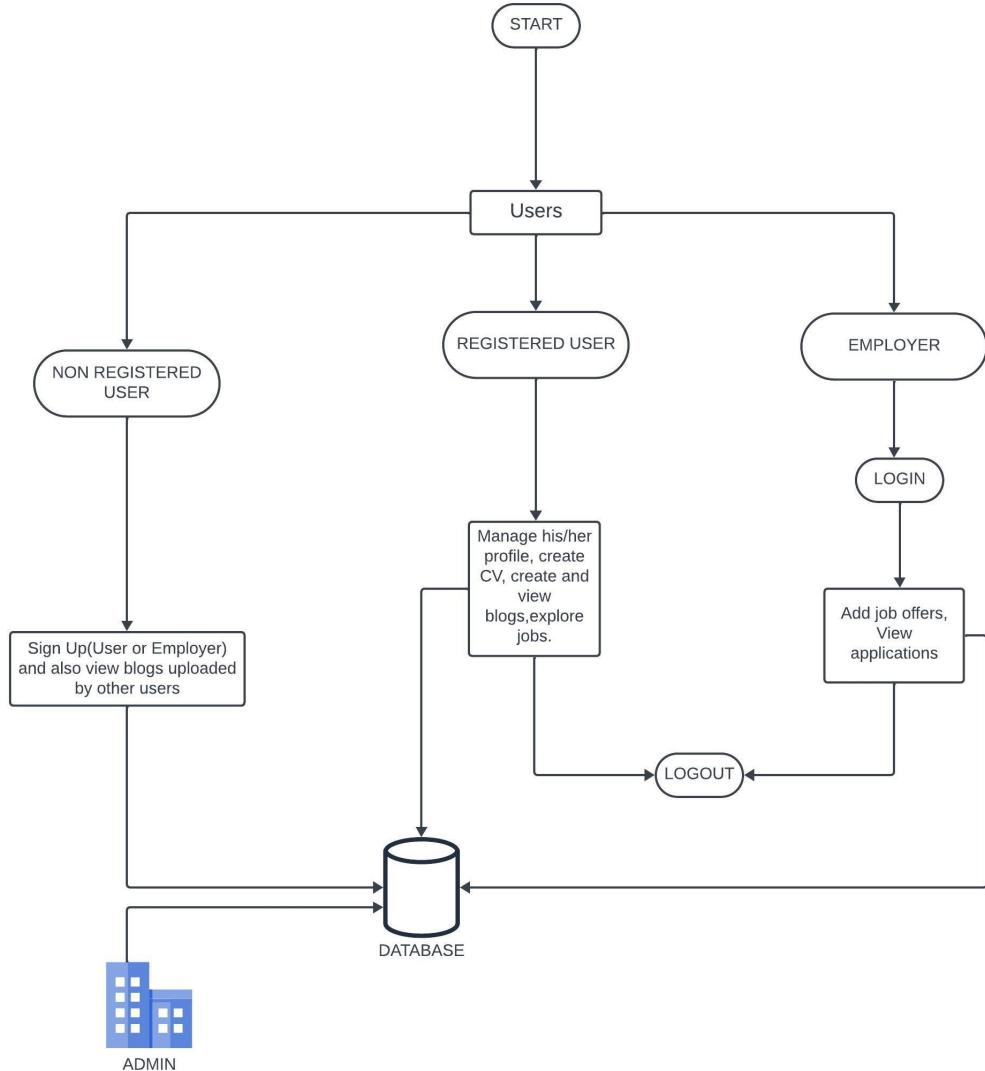


Figure 5.10: Activity Diagram

The Activity Diagram for SeeV encapsulates the intricate workflow and interactions within the system, illustrating the various activities and transitions as users navigate through different functionalities. It outlines the sequential flow of actions undertaken by users, depicting how they interact with the platform's features.

At its core, the diagram delineates the primary activities users engage in while using SeeV. Starting with the initial activity of logging in or signing up, users traverse through distinct pathways based on their role as either registered users or employers. Registered users proceed to create, view, or update their profiles, including generating CVs, exploring

jobs, and engaging with blogs. Simultaneously, they may provide feedback, enhancing the platform's functionality and usability.

Employers, on the other hand, access unique activities such as posting job opportunities, reviewing applicants' profiles, and managing job applications. The diagram also illustrates how non-registered users interact with the platform by viewing blogs and subsequently signing up, selecting between registering as job seekers or employers.

Each activity is connected through transition paths, showcasing the logical sequence of user interactions. For instance, after signing up, users may log in to access the system's functionalities. These pathways align with conditional flows, allowing users to perform specific activities based on their roles or status within the platform.

Overall, the Activity Diagram serves as a visual roadmap, offering a comprehensive overview of the sequential user interactions and operational functionalities within SeeV, facilitating a smooth and intuitive user experience.

5.10 SEQUENCE DIAGRAM

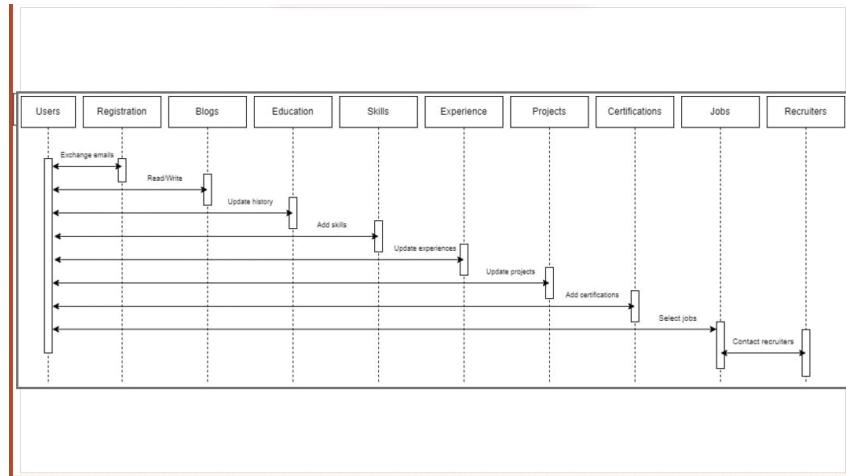


Figure 5.11: Sequence Diagram

The sequence diagram meticulously illustrates the flow of interactions within SeeV's ecosystem, specifically emphasizing the core functionalities while omitting social engagement features like liking, commenting, and sharing.

Upon user login or signup, authentication processes are triggered to validate and grant access to the system's functionalities. Registered users can seamlessly modify their profiles

through a series of steps involving data validation, processing user inputs, and updating profile information.

The platform empowers users to engage in various activities such as creating or browsing blogs, leveraging the AI-powered resume generation tool, and exploring job opportunities. When applying for a job through SeeV, users input application details which prompt a systematic sequence within the system. This sequence involves recording the application, updating the job status, and managing applicant details to ensure a smooth application process.

For employers, the focus is on functionalities such as posting job listings, evaluating submitted applications, and managing applicant information. The sequence of interactions enables employers to seamlessly navigate the system, review submitted applications, and oversee job postings without emphasizing the social aspects of engagement.

Throughout these interactions, the sequence diagram underscores the systematic flow of actions, ensuring the efficient utilization of SeeV's functionalities tailored toward facilitating job searches, application submissions, and employer interactions without including the social interaction features like liking, commenting, or sharing content.

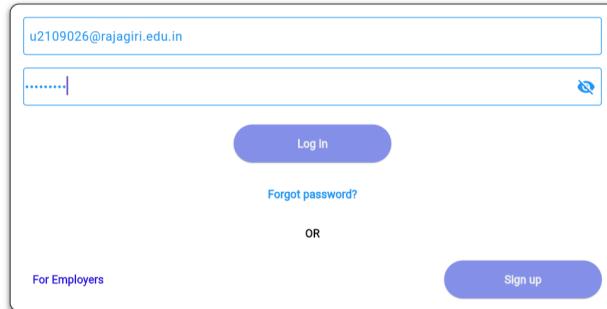
Chapter 6

RESULTS AND DISCUSSIONS

The chapter provides a visual overview of the cv builder website with the help of screenshots and brief descriptions of system's interfaces, functionalities and overall output.

6.1 Login Page

6.1.1 Login job seeker



Want to try the website without signing up? Click here

Figure 6.1: Login Page for job seekers

Figure 6.1 shows the login page for registered users. Non-registered users can sign up by clicking on 'sign up' button and in case user forgets their password they can manage it by clicking 'forgot password' option.

6.1.2 Login employer

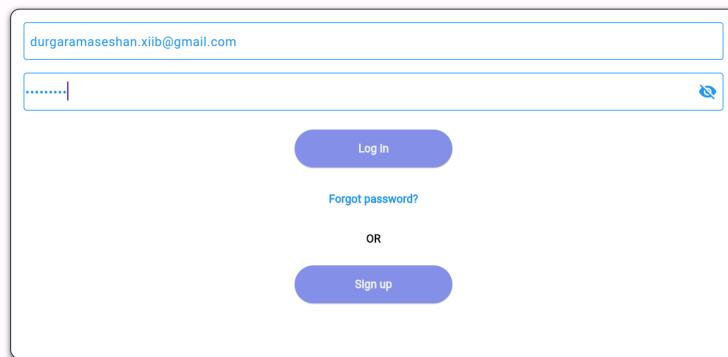
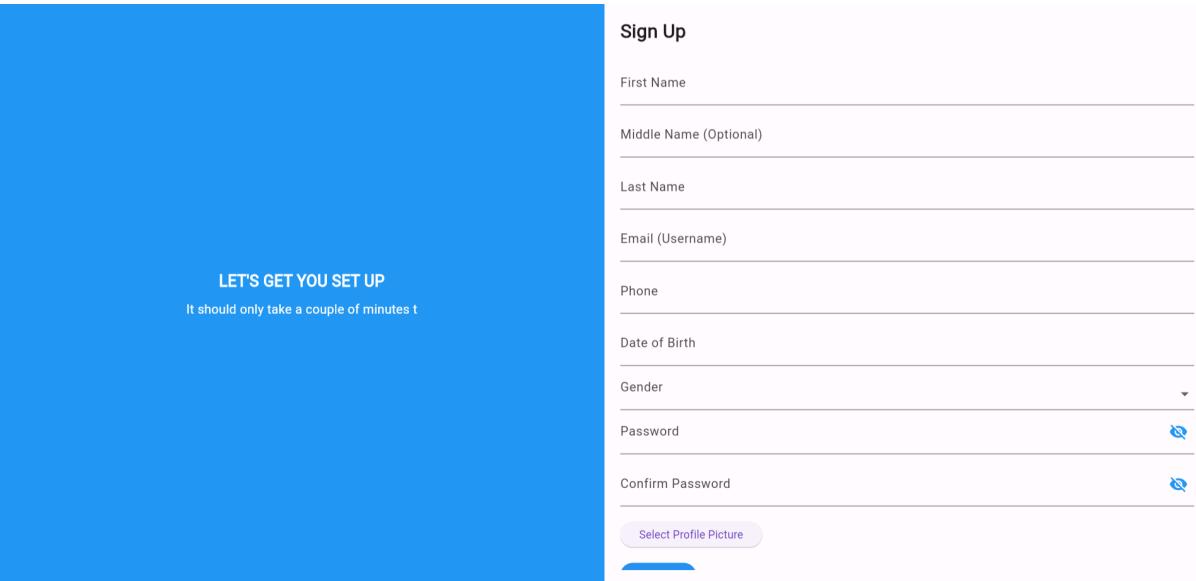


Figure 6.2: Login page for employers

Figure 6.2 shows the login page for registered employers. Non-registered employers can sign up by clicking on 'sign up' button and in case user forgets their password they can manage it by clicking 'forgot password' option.

6.2 Sign Up Page

6.2.1 Job Seeker signup



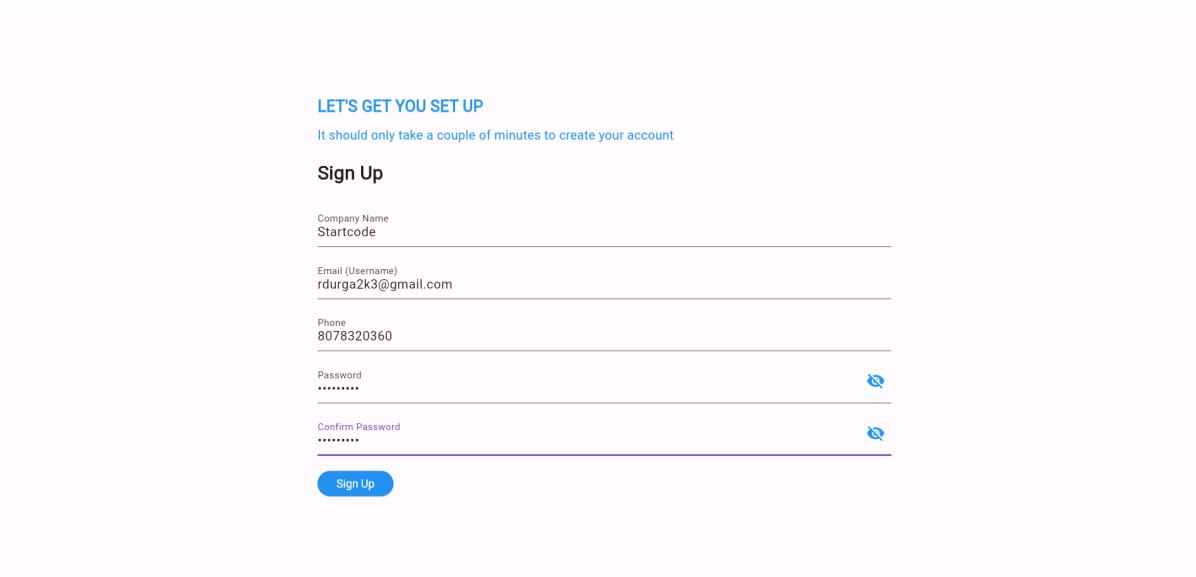
The screenshot shows the 'Sign Up' page for job seekers. The background is blue on the left and white on the right. On the left, there's a large blue area with the text 'LET'S GET YOU SET UP' and 'It should only take a couple of minutes t'. On the right, there's a form titled 'Sign Up' with fields for First Name, Middle Name (Optional), Last Name, Email (Username), Phone, Date of Birth, Gender, Password, Confirm Password, and a 'Select Profile Picture' button.

Field	Description
First Name	Text input field
Middle Name (Optional)	Text input field
Last Name	Text input field
Email (Username)	Text input field
Phone	Text input field
Date of Birth	Text input field
Gender	Dropdown menu
Password	Text input field with eye icon
Confirm Password	Text input field with eye icon
Select Profile Picture	Button

Figure 6.3: Signup page for job seekers

Figure 6.3 shows the sign up page for job seekers. Users can register into the system by specifying the details mentioned in order to get access to all features of SeeV

6.2.2 Employer Signup



The screenshot shows the 'Sign Up' page for employers. The background is white. It has a 'LET'S GET YOU SET UP' section with the same text as Figure 6.3. Below it is a form with fields for Company Name (Startcode), Email (Username) (rdurga2k3@gmail.com), Phone (8078320360), Password (*****), and Confirm Password (*****). A 'Sign Up' button is at the bottom.

Field	Description
Company Name	Text input field
Email (Username)	Text input field
Phone	Text input field
Password	Text input field with eye icon
Confirm Password	Text input field with eye icon
Sign Up	Button

Figure 6.4: Signup page for employers

Figure 6.4 shows the sign up page for employers. By specifying their details, they can register into the system and access employer features

6.3 Update Info

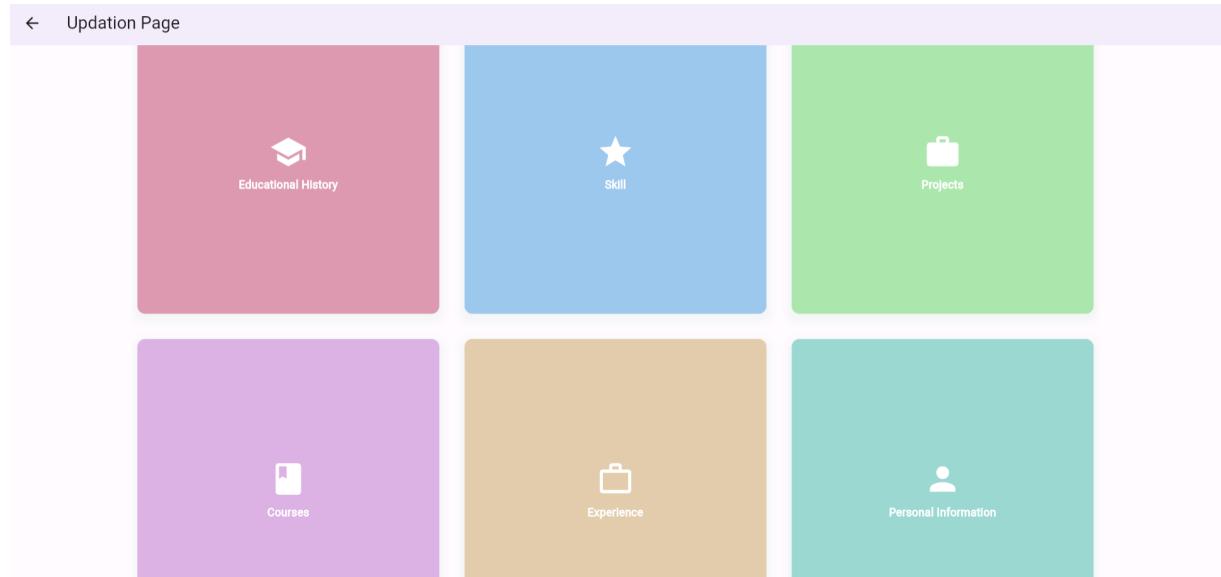


Figure 6.5: Update information page

Figure 6.5 shows the website's information update screen where the users can update and modify their details. Figure 6.5 to 6.10 shows the layout of different update options.

6.3.1 Update profile

The screenshot shows a 'Profile Update' form with the following fields:

- Middle Name: (empty)
- Last Name: Ramaseshan
- Phone: 8078320360
- GitHub: (empty)
- LinkedIn: (empty)
- Date of Birth: 2003-09-21
- Email: u2109026@rajagiri.edu.in
- Gender: Female
- Password: (empty)
- Confirm Password: (empty)

A blue 'Update Profile' button is at the bottom.

Figure 6.6: Update Profile details

6.3.2 Update experiences

The screenshot shows an 'Update Info' form for 'EXPERIENCE' with the following details:

- Name of Institution: Technovia
- (From) Date: 24/09/2023
- (To) Date: 28/09/2023
- Job position: Intern
- Skill 1: Mobile app development

Buttons for 'Add Skill' and 'Update Information' are visible. A table below lists the experience details:

Sno	Institution	From Date	To Date	Job Position	Skills
1	Technovia	24/09/2023	28/09/2023	Intern	Mobile app development

Figure 6.7: Update experience details

6.3.3 Update courses

Update Info

COURSES
Enter Details

Course Name
Skill 1
Skill 2

Add Skill
Update Information

COURSES LIST

Course Name	Skills
Introduction to Python	Python, , Programming

Figure 6.8: Update course details

6.3.4 Update projects

Update Info

PROJECTS:
Enter Details

Project Name
Description
Skill 1

Add Skill
Update Information

No project details added yet.

Figure 6.9: Update project details

6.3.5 Update skills

Update Information

Skills:

Skill
Skill

Intermediate ▾

Update Information

Sno	Skill	Level
1	Programming in C	Intermediate
2	Fast learner	Intermediate

Figure 6.10: Update skills

6.3.6 Update education details

[←](#) Update Info

EDUCATION DETAILS:

Institution
BVM Eroor

From Date To Date

Percentage
93.4

High school

Course Taken
Computer Science

Update Information

Sno	Institution	From Date	To Date	Percentage	Education Level	Course Taken
1	BVM Eroor	2019-07-12 00:00:00.000	2021-05-20 00:00:00.000	93.4	High school	Computer Science

Figure 6.11: Update education details

6.4 Jobs



Figure 6.12: Update job details

Figure 6.12 shows the job screen where available job offers are displayed. Users can read through opportunities and apply for ones they find interesting.

← Applicants for Jobs

Software engineer Intern	
Devika Sanjai	devikasanjai2003@gmail.com
Shruti Shibu	u2109064@rajagiri.edu.in
Noel Eldho	u2109053@rajagiri.edu.in
Durga Ramaseshan	u2109026@rajagiri.edu.in
Devika Sanjai	devikasanjai2003@gmail.com
Durga Ramaseshan	u2109026@rajagiri.edu.in
Devika S	u2109025@rajagiri.edu.in
Durga Ramaseshan	u2109026@rajagiri.edu.in
Devika S	u2109025@rajagiri.edu.in

Figure 6.13: View Job Applicants

Figure 6.13 shows the screen showing the list of applicants for each jobs. It show the username and email id of the applicant.

6.5 Blogs

6.5.1 VIEW BLOGS



Figure 6.14: Page to view blogs

Figure 6.14 shows website's layout for blogs uploaded by users related to CV's, career exploration and other related topics.

6.5.2 CREATE BLOGS

The screenshot shows a user interface for creating a new blog post. At the top, a blue header bar contains a back arrow icon and the text "Add Blog". Below the header are three input fields: "Title", "Subtitle", and "Type your blog content...". A pink "Upload" button is located at the bottom right of the input area.

Figure 6.15: Page to create blogs

Figure 6.15 shows the screen where the registered users can upload new blogs.

6.6 CV Generation

6.6.1 Generated CV

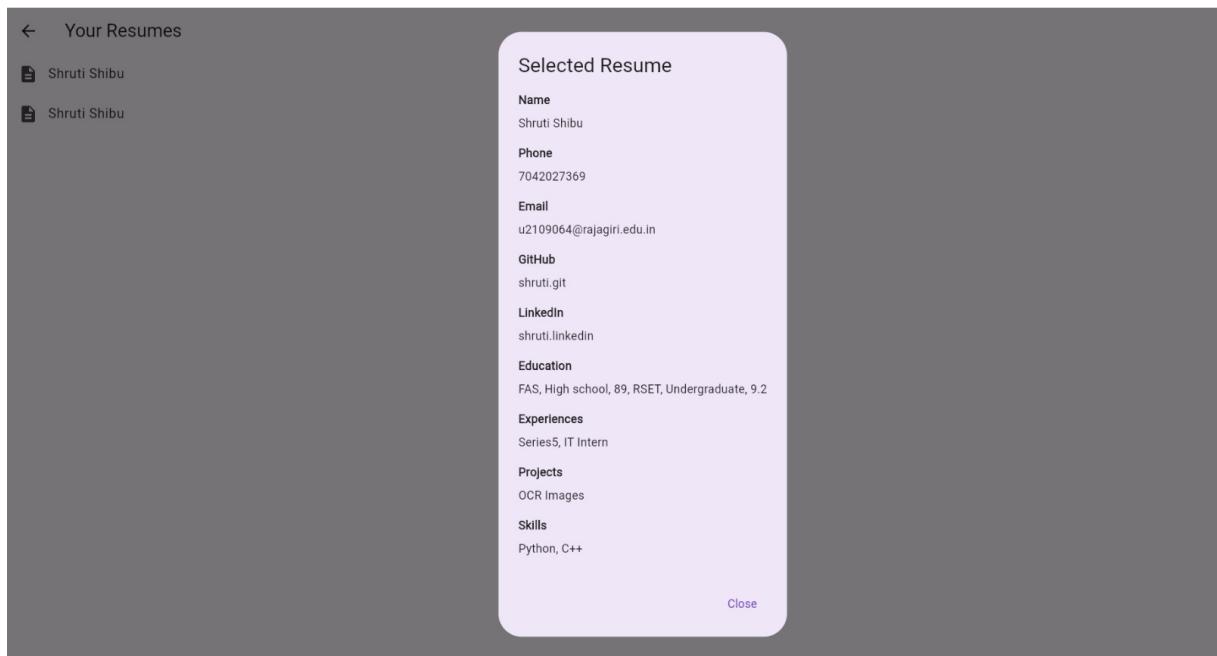


Figure 6.16: CV

Figure 6.16 shows the CV generated for the user when they click on apply button.

6.6.2 Created CV's

← Your Resumes

 Durga Ramaseshan

 Durga Ramaseshan

 Durga Ramaseshan

Figure 6.17: List of CV's created

Figure 6.17 shows all the CV's that have been created for the user so far.

Chapter 7

CONCLUSION

The inception of SeeV represents a significant stride in the domain of CV generation, addressing the pressing challenges confronted by both job seekers and employers. By integrating advanced Natural Language Processing (NLP) and machine learning algorithms, this platform revolutionizes the CV creation process, rendering it not only more efficient but also highly personalized. Its user-centric design ensures accessibility, accommodating individuals across diverse technological proficiencies. The comprehensive literature survey conducted has provided profound insights into the current landscape of AI in resume building, encompassing crucial aspects like information extraction, personalization, fairness, security, and user adoption. The prime objective of SeeV is to deliver personalized and unbiased outcomes, generating compelling CVs to uplift its users' professional prospects. Through rigorous testing and iterative feedback loops, the platform aims to continually refine its user interface, ensuring a seamless experience that propels users forward in their career pursuits.

Expanding the horizons, SeeV paves the way for numerous future advancements and expansions. Exploring the integration of cutting-edge NLP and machine learning models stands as a key avenue, enhancing the system's ability to comprehend user input with greater precision, thereby improving information extraction and personalization. Extending support for multiple languages would broaden its reach, catering to a diverse global user base seeking career advancement. The incorporation of more sophisticated algorithms for user profiling and preferences analysis will further elevate the level of CV personalization. Establishing mechanisms for continuous learning from user interactions and feedback will enable the system to evolve dynamically, adapting to evolving industry trends and user preferences over time.

In essence, SeeV's trajectory is not just about its current state but also about its potential for future growth and refinement. It envisions a landscape where job seekers are

empowered with personalized and impactful tools, transcending barriers and unlocking new opportunities in the ever-evolving professional sphere.

FUTURE SCOPE

Multilingual Support: Extend SeeV's capabilities to support multiple languages, catering to a diverse global user base. Providing language options could significantly broaden the platform's reach and usability.

Refinement of Personalization Algorithms: Develop more sophisticated algorithms for user profiling and preference analysis. This enhancement would further refine the personalization of CVs, aligning them more precisely with individual user preferences.

Continuous Learning and Adaptation: Establish mechanisms to continuously learn from user interactions and feedback. This adaptive learning approach would enable SeeV to evolve dynamically, staying updated with changing industry trends and user preferences over time.

Enhanced User Interface and Experience: Focus on continuous testing, user feedback, and iterative improvements to ensure a more intuitive and user-friendly interface. This effort aims to streamline the user experience and make the platform more accessible to users with varying levels of technological proficiency.

Expand Beyond CV Generation: Explore diversifying the platform's offerings beyond CV generation. This could include additional career development tools, job-seeking resources, or skill enhancement modules to provide users with a more comprehensive career support system.

Incorporating Blockchain Technology: Consider integrating blockchain technology for enhanced security and data integrity, ensuring users' information and interactions are secure and immutable.

Collaborations and Partnerships: Forge partnerships or collaborations with educational institutions, industry experts, or recruitment agencies to offer specialized content, industry insights, or exclusive job opportunities within the platform.

Chapter 8

REFERENCES

- <https://www.indeed.com/career-advice/resumes-cover-letters/cv-format-guide>
- <https://www.uml-diagrams.org/index-examples.html>
- <https://docs.flutter.dev>
- <https://firebase.google.com/docs/guides/>
- <https://novoresume.com/career-blog/resume-statistics>
- <https://www.forbes.com/sites/ashleystahl/2021/06/10/how-to-write-a-competitive-resume-in-2021/?sh=3967813e7724>
- <https://www.fool.com/careers/2019/04/03/does-it-pay-to-use-a-resume-service-new-data-says.aspx>

PRESENTATION

Slides of our presentation are uploaded below.

SEE-V

An innovative AI tool to step up your career game

Group members:

Devika S (U2109025)

Durga Ramaseshan (U2109026)

Shruti Maria Shibu (U2109064)

Project Guide: Ms Bency Wilson

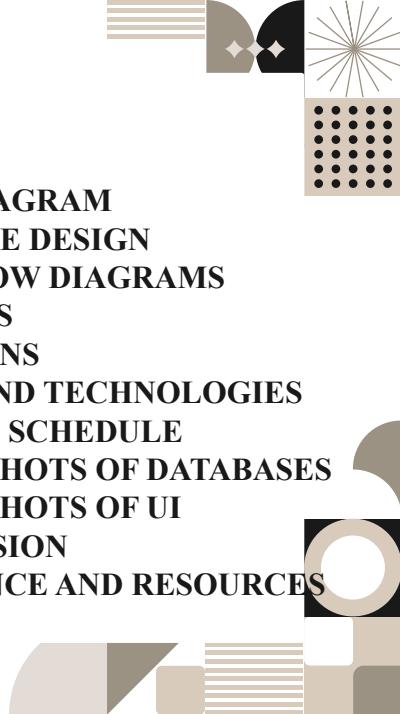
Project Coordinator: Mr. Ajith Jacob



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- 2. PROBLEM DEFINITION
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INTRODUCTION

- See-V: An innovative AI tool to step up your career game
- The aim of this mini project is to empower users to craft professional and striking CVs in today's fiercely competitive job market, quickly and easily.

PROBLEM DEFINITION



THE PROBLEM: The cut throat competitive market proves as a barrier to freshers and job seekers because of lack of guiding knowledge to create a professional CV



SOLUTION: Creating a web application that allows to generate an professional CV that is personalized according to job preferences and acts as a guiding light throughout the process of seeking a job

AREA OF FOCUS

- Facilitate creation of curated CVs to make job search easier
- Gather more information about prevailing job conditions and trends
- Understand personal interests of users to match jobs accordingly
- Provide step by step guide to students who have a clear goal but do not know how to achieve it

APPLICATIONS

- Personalized CV Generation:
 - Customized and professionally curated CV by emphasizing the skills, experiences, and achievements, with the flexibility to showcase your individuality while adhering to industry standards.
- AI-Powered Job Matching:
 - Match your skills and preferences with relevant job opportunities, streamlining the job search process.
 - Revolutionize your career journey by precisely aligning your unique skills and preferences with the most relevant job opportunities.

- Community Collaboration:
 - Fuel collaborative learning and networking within your college community through our Community Collaboration feature.
 - Engage in shared resources, including insightful blogs on job trends, CV writing tips, and career strategies.
- Career Insights Dashboard:
 - Access a personalized dashboard powered by SeeV, providing real-time career insights, trends, and recommendations based on your profile and goals.

CHALLENGES

- Data Quality and Consistency
- Context Understanding
- Dynamic Job Market



LITERATURE REVIEW

EXISTING WORKS

1. Zety
2. ResumeGenius
3. Canva



ResumeGenius



STRENGTH AND LIMITATIONS OF:

- **Zety** :Zety excels in user-friendliness with a drag-and-drop editor but has limitations in customization for free users.
- **ResumeGenius** :Stands out for its step-by-step approach and pre-written content but restricts certain features behind a paywall.
- **Canva** :Canva balances functionality with a design-focused approach, offering a wide range of design templates and collaborative features.

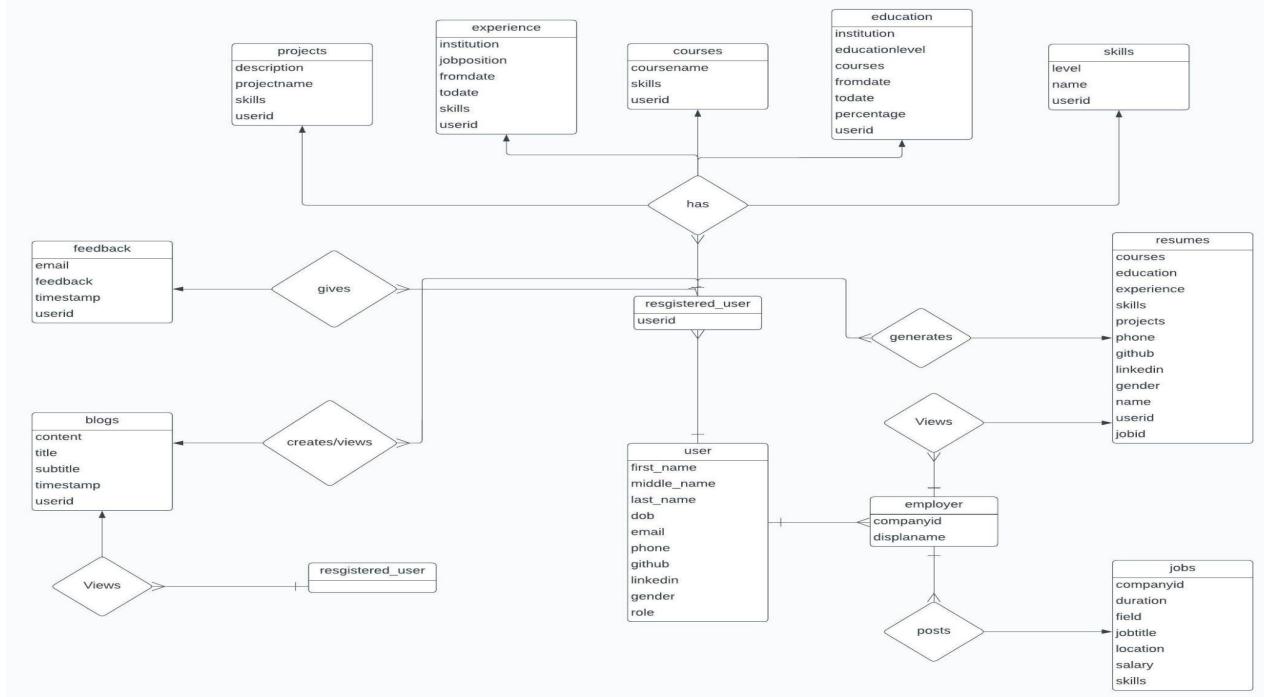
GENERAL LIMITATIONS

- Common limitations across platforms include constraints on template variety, branding on free versions, and dependency on internet connectivity.

INDUSTRY RECOMMENDATIONS

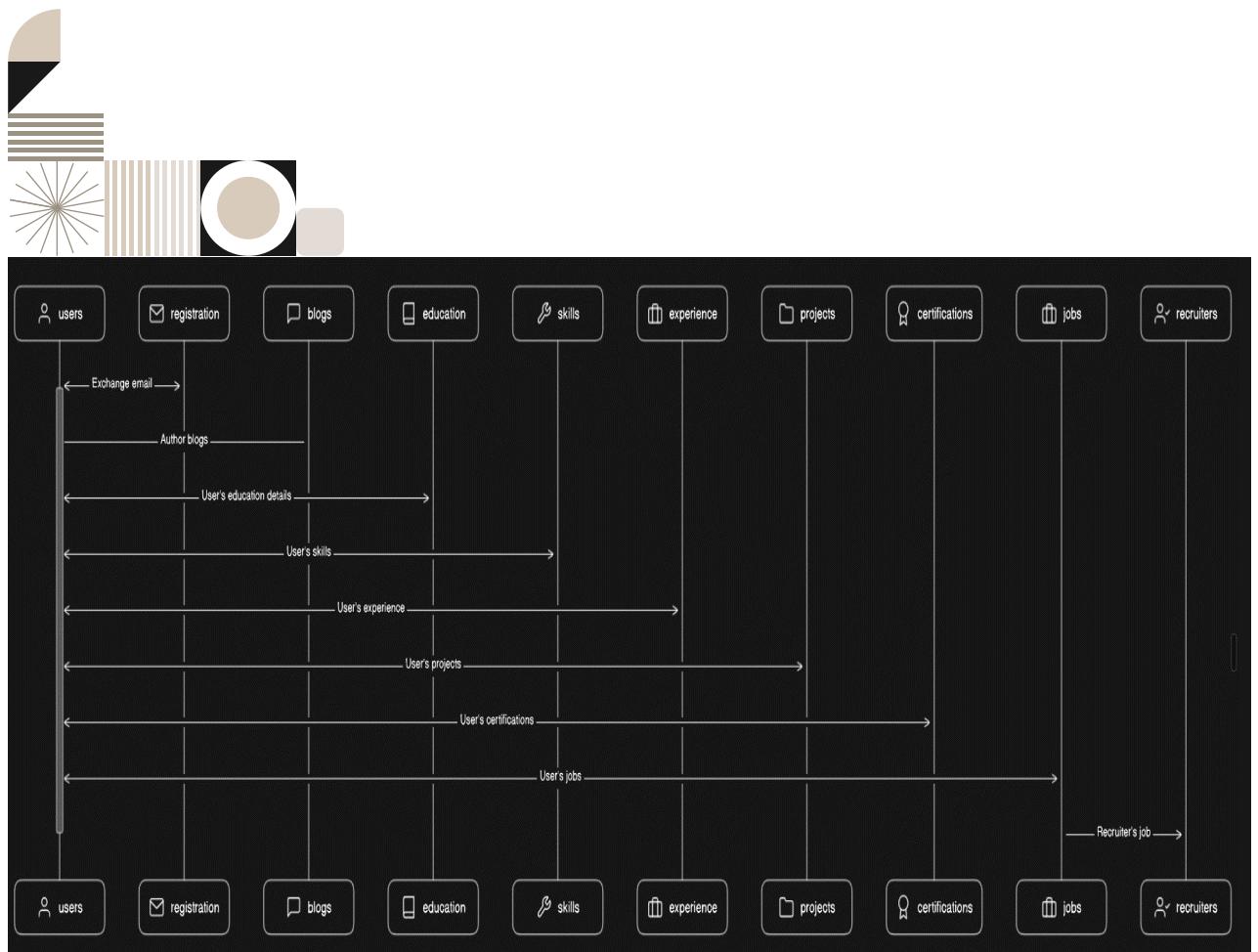
- Advocates for a stronger focus on template variety, enhanced customization options, and robust data security measures to address existing limitations in the industry.

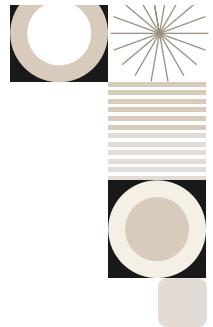
ER DIAGRAM



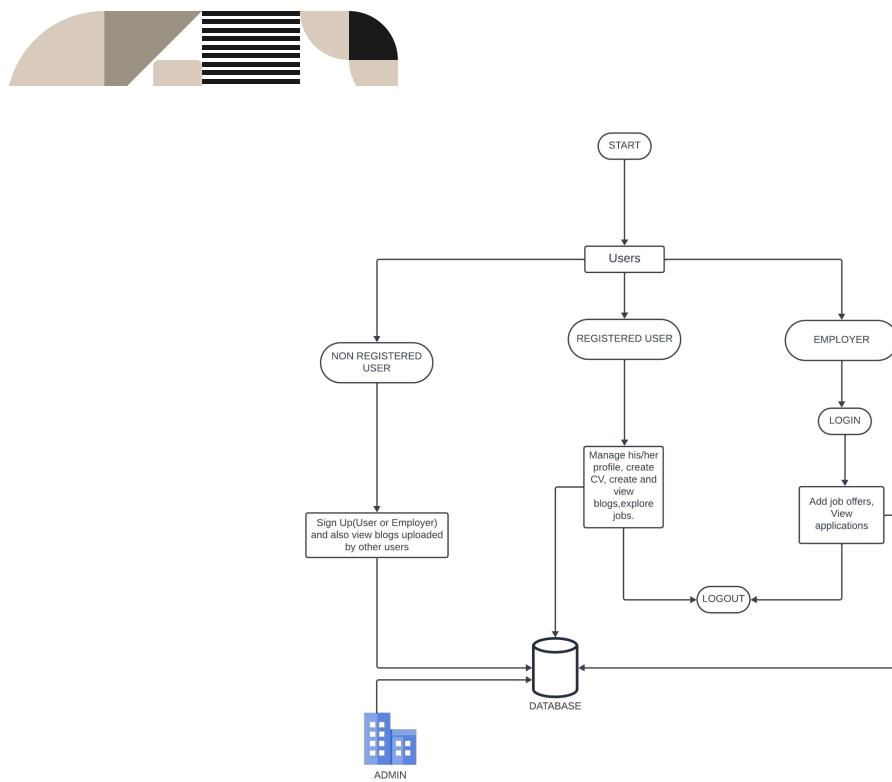


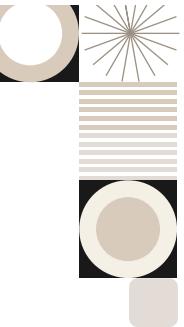
SEQUENCE DIAGRAM



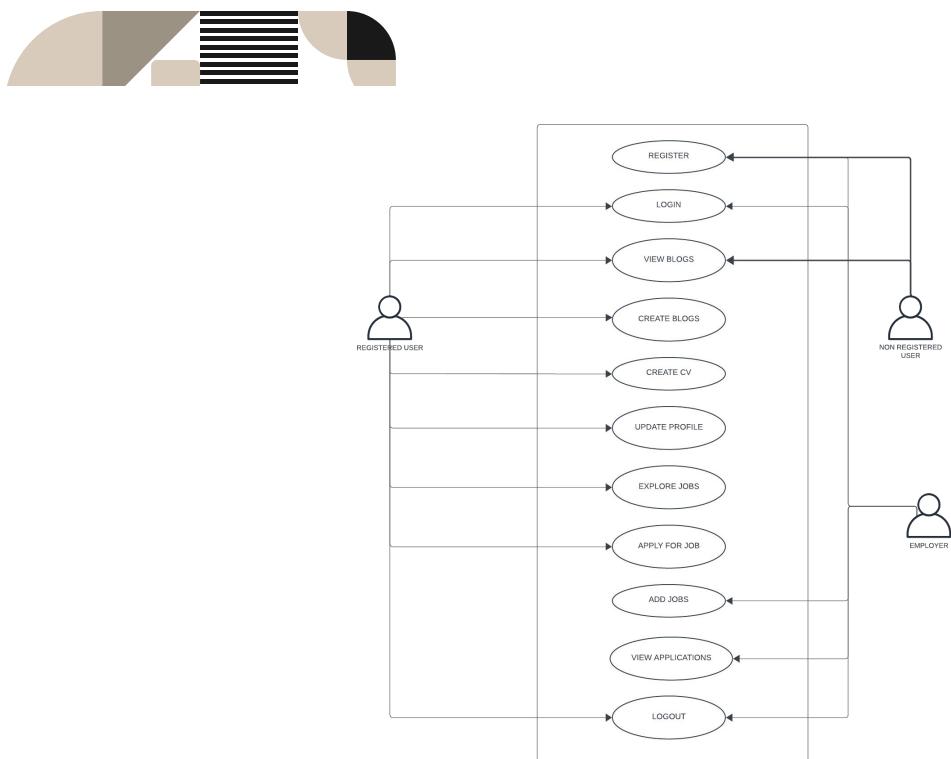


ACTIVITY DIAGRAM

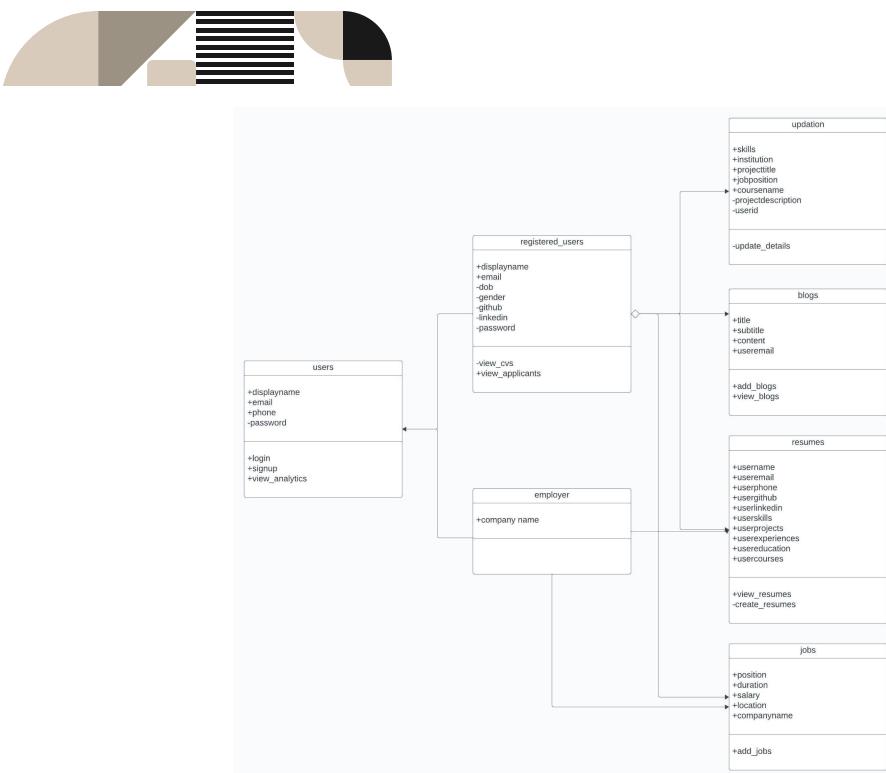




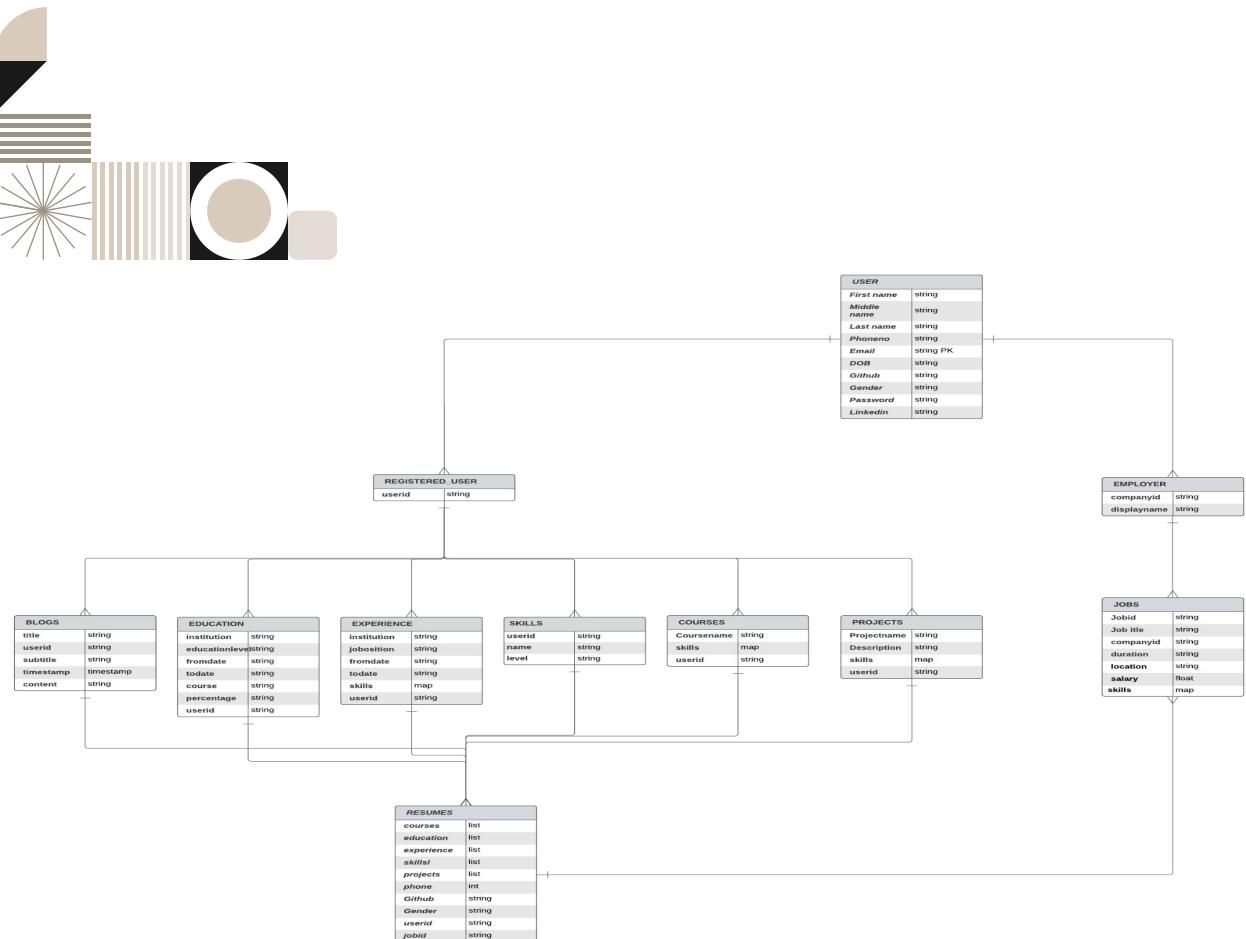
USE CASE DIAGRAM



CLASS DIAGRAM

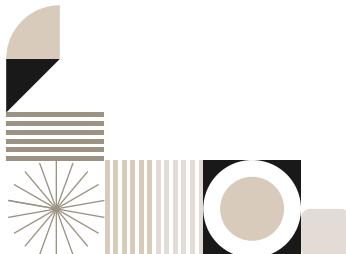


DATABASE DESIGN

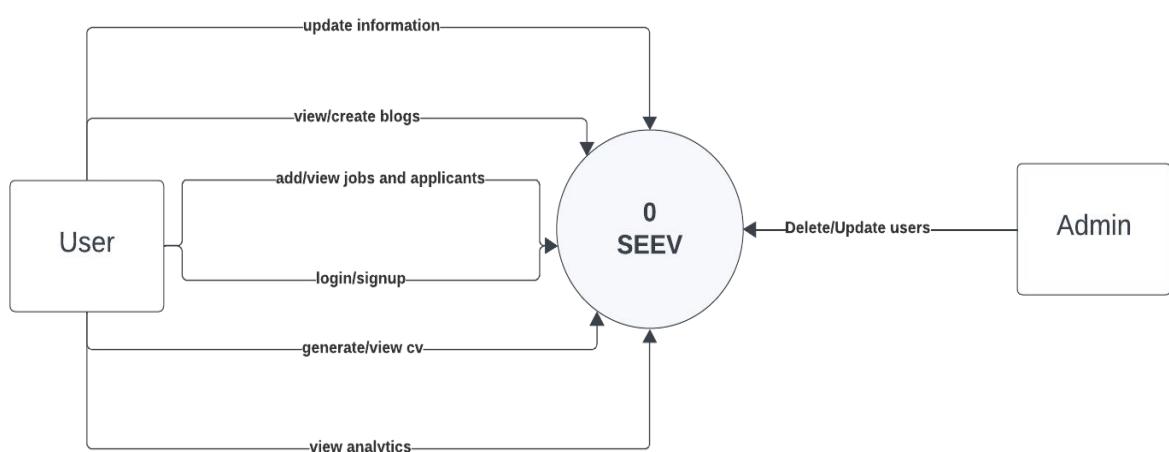




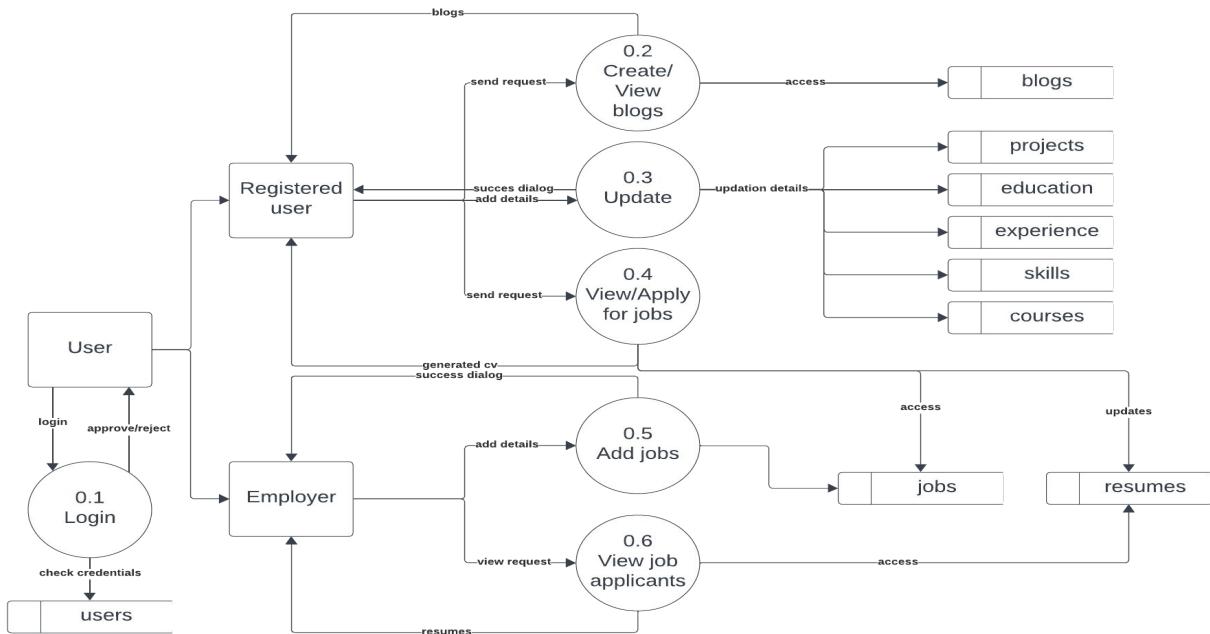
DATA FLOW DIAGRAMS



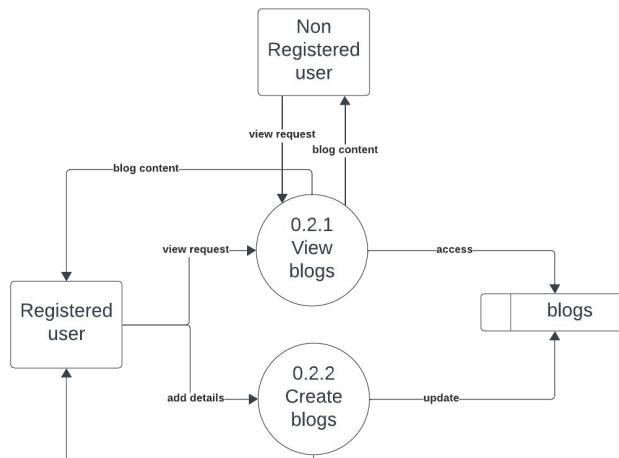
LEVEL 0 DFD



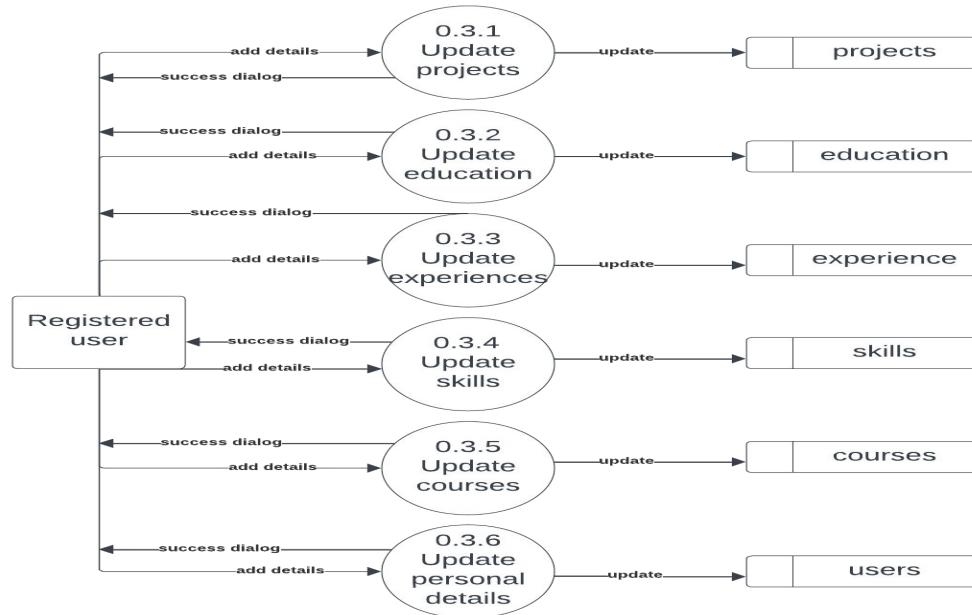
LEVEL 1 DFD



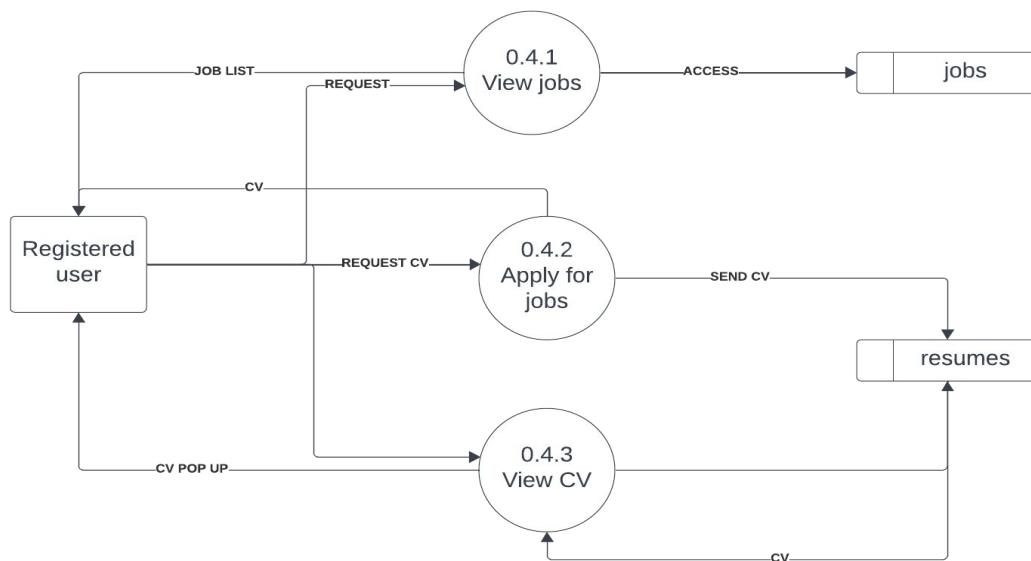
LEVEL 2 DFD



LEVEL 2 DFD



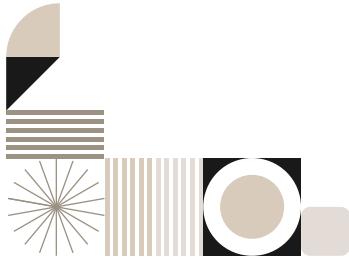
LEVEL 2 DFD





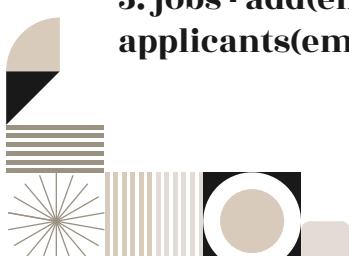
MODULES

1. **BLOGS**
2. **UPDATE**
3. **CV**
4. **AUTHENTICATION**
5. **JOB**



FUNCTIONS

- 1. Update - Projects, experiences, skills, experience, courses, personal details**
- 2. Blogs - view(registered, non registered users), add**
- 3. cv - view(users, employers), generate**
- 4. authentication - login, signup**
- 5. jobs - add(employer), view(user), apply(user), view job applicants(employer)**



TOOLS & TECHNOLOGIES



Programming
Languages:
Dart



Frameworks:
Firebase,Flutter



Database:
Firestore



Version
Control: Git,
Github

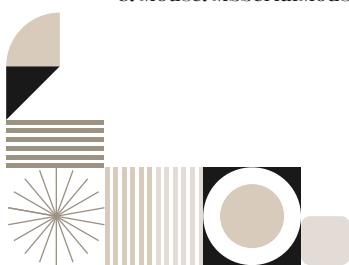
REQUIREMENTS

HARDWARE REQUIREMENTS

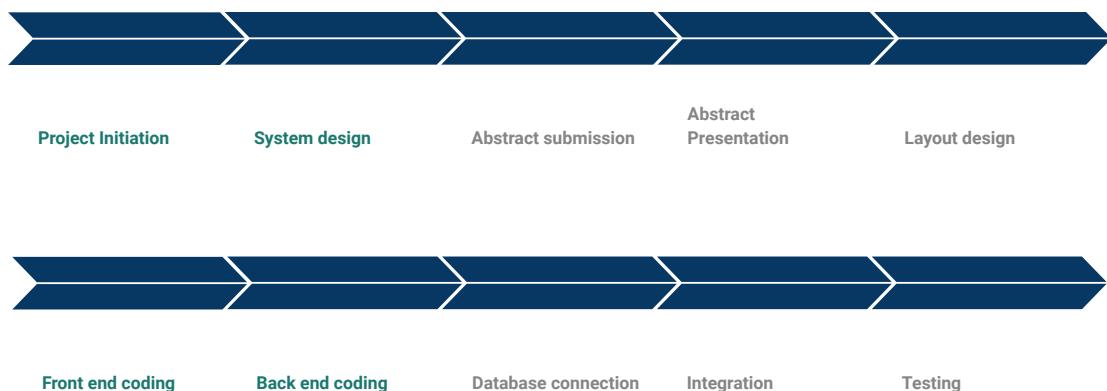
1. CPU: i3 Processor or above
2. Memory: 170 MB
3. Cache: 723KB
4. Floppy Disk.: 1.44MB
5. HardDisk: 4.5GB
6. Display: 15" Monitor
7. Keyboard: Standard 108 keys Enhanced KeyBoard
8. Mouse: MS Serial Mouse

SOFTWARE REQUIREMENTS

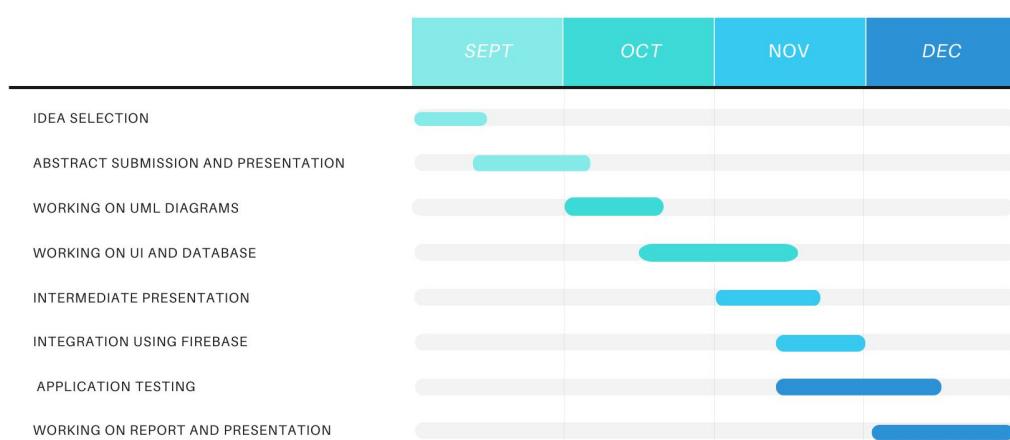
1. Operating System: Windows XP, 7 or above
2. Front End Tool: DART
3. Back End Tool: PYTHON, SQL
4. IDE: VISUAL STUDIO CODE



PROJECT SCHEDULE



GANTT CHART (SEPTEMBER - DECEMBER)



NAME	MEMBERS
Project research	Devika,Durga,Shruti
UML Diagrams	Devika,Durga,Shruti
Back-end	Shruti
Front-end	Devika,Durga
Report	Durga
Presentation	Shruti,Devika

TASK ASSIGNMENT



DATABASES

User role: registered_user(created during registration) (Also used for authenticating users while logging in)

The screenshot shows the Google Cloud Firestore interface. On the left, there's a sidebar with a 'users' collection containing items like 'blogs', 'courses', etc. Below this is a 'users' section with a 'users' sub-section. A specific document ID '5b3fg5ivb3geug2EJoEGRtvWo8k2' is selected. The document details are shown on the right:

```

{
  "dob": "2002-01-02",
  "email": "u2109064@rajagiri.edu.in",
  "first_name": "Shruti",
  "gender": "Female",
  "github": "shruti.git",
  "last_name": "Shibu",
  "linkedin": "shruti.linkedin",
  "middle_name": "Maria",
  "phone": "7042027369",
  "profile_picture_url": "",
  "role": "registered_user"
}

```

User role: employer(created during registration) (Also used for authenticating users while logging in)

The screenshot shows the Google Cloud Firestore interface. On the left, there's a sidebar with a 'users' collection containing items like 'blogs', 'courses', etc. Below this is a 'users' section with a 'users' sub-section. A specific document ID '9NIdx3i0EkfexlgDeXijTbNPQeg1' is selected. The document details are shown on the right:

```

{
  "displayName": "Startcode",
  "email": "durgaramaseshan.xiib@gmail.com",
  "phone": "8078320360",
  "role": "employer"
}

```

Courses

The screenshot shows the MongoDB Compass interface with the 'courses' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'courses' collection is expanded, showing documents with IDs 0SOY5bwIsfHrW8Uj1ByE and HUq5SJCgvVztooURleOD. The document 0SOY5bwIsfHrW8Uj1ByE contains fields: courseName: "ML", skills: ["Python", "Math"], and userId: "5b3fg5ivb3geug2EJoEGRtvWo8k2".

Education

The screenshot shows the MongoDB Compass interface with the 'education' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'education' collection is expanded, showing documents with IDs 5bUXNasFVg4vIKqsXnb2 and 7s7hXnL4uDaLebsiT6b. The document 5bUXNasFVg4vIKqsXnb2 contains fields: course: "", educationLevel: "Primary school", fromDate: "", institution: "FAS", percentage: "100" (with a string type indicator), toDate: "", and userId: "5b3fg5ivb3geug2EJoEGRtvWo8k2".

Experience

The screenshot shows the MongoDB Compass interface with the 'experience' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'experience' collection is expanded, showing documents with IDs like 0Va4m5PCxrGD7sk0wlpV, HaLjkDLHdEKD4awU9Mic, Htqms2SAxuGMGfxFyrDy, Tl7n1mjIDtfkHkRV403w, eVNdTVOS3Bts9V3vHFQx, pAzu0ha9sXM9gy2TXg0H, and y2GFH7ilB2WrpvL1xYso. The document details for the first document are displayed on the right, including fields: fromDate: "24/09/2023", institution: "Technovia", jobPosition: "intern", skills: ["Mobile app development"], toDate: "28/09/2023", and userId: "LTVFHhkPxawNyVvKVjVAaxDsAXf2".

Jobs

The screenshot shows the MongoDB Compass interface with the 'jobs' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'jobs' collection is expanded, showing documents with IDs like 3sIKRsgc2bc9JbQQXVTm and PMH4cBk7JuKnKKaNrmV. The document details for the first document are displayed on the right, including fields: companyId: "KicCWue46ocxUOVh1u33dNS1Llg1", duration: "3 months", field: "IT", jobTitle: "Software engineer Intern", location: "Delhi", salary: "3000", and skills: ["C++", "Python"].

Projects

The screenshot shows the Firebase Firestore interface. On the left, the sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects (selected), resumes, skills, and users. The main area displays the 'projects' collection with one document selected: 6pWYXv9aKNVPCibgJN4j. The document details are:

- description: ""
- projectName: "CV Builder"
- skills
 - 0 "Flutter"
 - 1 "Documentation"
- userId: "5b3fg5ivb3geug2EJoEGRtvWo8k2"

Skills

The screenshot shows the Firebase Firestore interface. On the left, the sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills (selected), and users. The main area displays the 'skills' collection with one document selected: 4VnxUHkU4fB5V2pSBxJJ. The document details are:

- level: "Intermediate"
- name: "Flutter"
- userId: "5b3fg5ivb3geug2EJoEGRtvWo8k2"

Blogs

The screenshot shows the MongoDB Compass interface with the 'blogs' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'blogs' collection is expanded, showing documents with IDs like Epk8jz0lqlxEQshCffNE and cgA1aC3es5IPO0mgtJHR. The document details for 'cgA1aC3es5IPO0mgtJHR' are displayed on the right, including fields: content ("This is a test."), subtitle ("Test Blog"), timestamp (January 2, 2024 at 3:11:41 PM UTC+5:30), title ("BLOG 1"), and userId ("5b3fg5ivb3geug2EJoEGRtvWo8k2").

Resumes

The screenshot shows the MongoDB Compass interface with the 'resumes' collection selected. The left sidebar lists collections: blogs, courses, education, experience, feedback, jobs, projects, resumes, skills, and users. The 'resumes' collection is expanded, showing documents with IDs like Bhv1BQ9iFuUGuOoQxBST and GvWGjNSjYQg5Pue17ZDy. The document details for 'GvWGjNSjYQg5Pue17ZDy' are displayed on the right, including fields: courses (ML), education (FAS, High school, 89; RSET, Undergraduate, 9.2), experiences (Series5, IT Intern), and contact information (email: u2109064@rajagiri.edu.in, github: shruti.git, jobId: 3sIKRsgc2bc9JbQQXVTm, linkedin: shruti.linkedin, name: Shruti Shibu, phone: 7042027369).

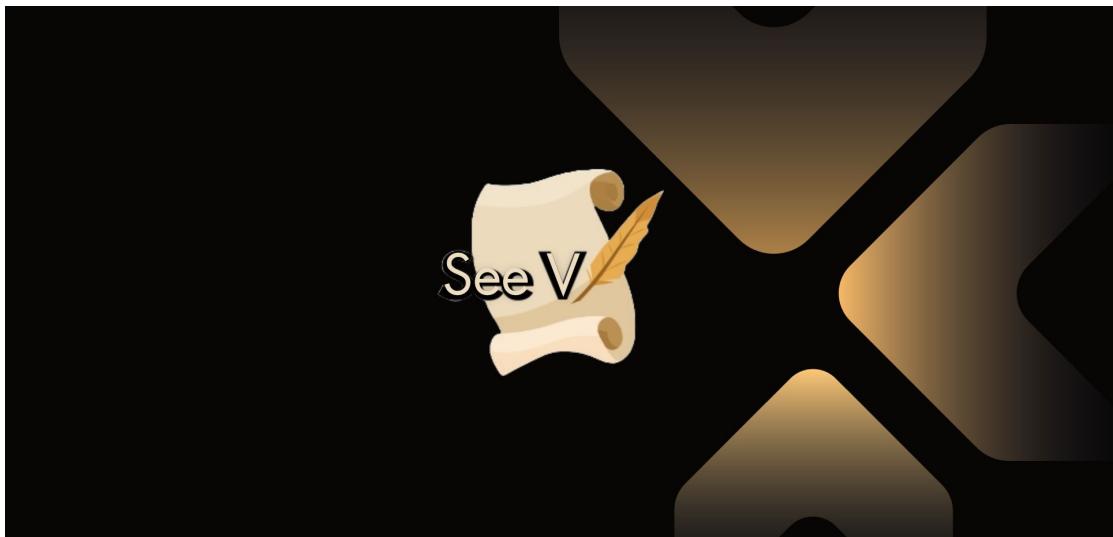
Feedback

The screenshot shows a MongoDB interface with a dark theme. On the left, there's a sidebar with a list of collections: blogs, courses, education, experience, feedback (which is selected), jobs, projects, resumes, skills, and users. In the center, under the 'feedback' collection, there is a list of documents. One document is highlighted with a blue border and has the ID 'Q1G8utZBZwKkaMfuTnY3'. To the right of the document list, there are buttons for 'Add document' and 'Add field'. The document details are shown in a panel on the far right:

- email: "u2109064@rajagiri.edu.in"
- feedbackText: "Add names for the graph!"
- timestamp: January 3, 2024 at 3:07:26 PM UTC+5:30
- userId: "5b3fg5ivb3geug2EJoEGRtvWo8k2"

USER INTERFACE

SPLASH SCREEN



LOGIN PAGE

The login page has a light gray header bar. Below it is a white rectangular form with rounded corners. It contains two input fields: the top one is for email with placeholder text "u2109026@rajagiri.edu.in" and the bottom one is for password with placeholder text ".....". To the right of the password field is a blue eye icon. Below the fields are a blue "Log In" button and a "Forgot password?" link. In the center, the word "OR" is written in small capital letters. At the bottom left is a "For Employers" link, and at the bottom right is a blue "Sign up" button.

Want to try the website without signing up? [Click here](#)

SIGN UP PAGE



LET'S GET YOU SET UP
It should only take a couple of minutes t

Sign Up

First Name _____

Middle Name (Optional) _____

Last Name _____

Email (Username) _____

Phone _____

Date of Birth _____

Gender _____

Password _____ 

Confirm Password _____ 

Select Profile Picture

EMPLOYER SIGNUP PAGE



LET'S GET YOU SET UP
It should only take a couple of minutes to create your account

Sign Up

Company Name
Startcode _____

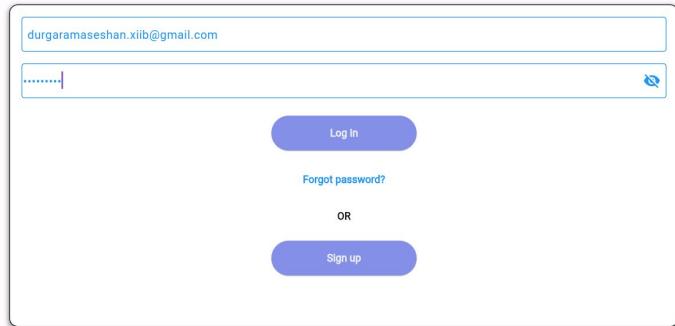
Email (Username)
rdurga2k3@gmail.com _____

Phone
8078320360 _____

Password
***** 

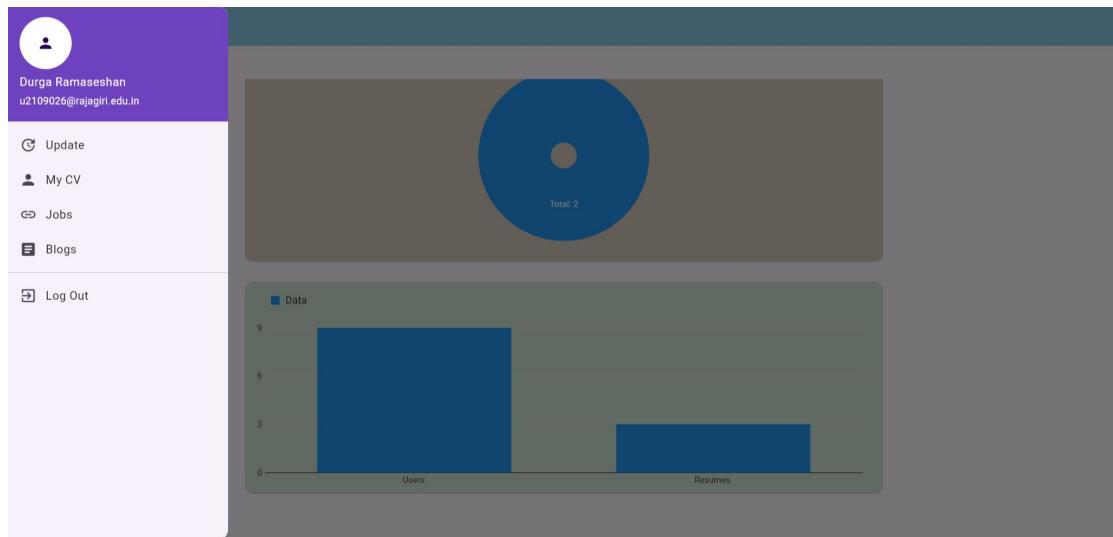
Confirm Password
***** 

EMPLOYER LOGIN PAGE



The login page features two input fields: one for email ('durgaramaseshan.xib@gmail.com') and one for password ('.....'). A blue 'Log In' button is centered below them. Below the password field is a 'Forgot password?' link. A horizontal line labeled 'OR' separates the login section from a 'Sign up' button.

HOME PAGE



The home page has a purple sidebar on the left containing a user profile icon, the name 'Durga Ramaseshan', and the email 'u2109026@rajagiri.edu.in'. It includes links for 'Update', 'My CV', 'Jobs', 'Blogs', and 'Log Out'. The main content area features a large circular icon with a blue gradient and the text 'Total: 2'. Below it is a bar chart titled 'Data' comparing 'Users' (9) and 'Resumes' (3).

Category	Data
Users	9
Resumes	3



FEEDBACK OPTION(HOME PAGE)



Feedback

Enter your feedback here

Submit Feedback



UPDATE INFORMATION PAGE

← Updation Page



Educational History



Skill



Projects



Courses



Experience



Personal Information

[← Update Info](#)

EDUCATION DETAILS:

Institution
BVM Eroor

[From Date](#) [To Date](#)

Percentage
93.4

High school

Course Taken
Computer Science

[Update Information](#)

Sno	Institution	From Date	To Date	Percentage	Education Level	Course Taken
1	BVM Eroor	2019-07-12 00:00:00.000	2021-05-20 00:00:00.000	93.4	High school	Computer Science

[Update Information](#)

Skills:

Skill
Skill

Intermediate ▾

[Update Information](#)

Sno	Skill	Level
1	Programming in C	Intermediate
2	Fast learner	Intermediate



Update Info

PROJECTS:

Enter Details

Project Name

Description

Skill 1

[Add Skill](#)

[Update Information](#)

No project details added yet.



← Profile Update

Middle Name

Last Name
Ramaseshan

Phone
8078320360

GitHub

LinkedIn

Date of Birth
2003-09-21

Email
u2109026@rajagiri.edu.in

Gender

Female ▾

Password



Confirm Password



[Update Profile](#)

VIEW JOBS PAGE

← Job View

Software engineer Intern

Company: Company X
Duration: 3 months
Salary: 3000
Job Field: IT
Location: Delhi

Apply

Math Teacher

Company: Company Y
Duration: 1 year
Salary: 30k
Job Field: Teaching
Location: Kerala

Apply

← Job View

Software engineer Intern

Company: Company X
Duration: 3 months
Salary: 3000
Job Field: IT
Location: Delhi

Apply

Math Teacher

Company: Company Y
Duration: 1 year
Salary: 30k
Job Field: Teaching
Location: Kerala

Apply

Generated CV

Name
Durga Ramaseshan
Phone
8078320360
Email
u2109026@rajagiri.edu.in
GitHub

LinkedIn

Experiences

Skills
Python
Courses
Introduction to Python
Projects

Close

VIEW RESUMES PAGE

← Your Resumes

 Durga Ramaseshan

 Durga Ramaseshan

 Durga Ramaseshan

VIEW BLOGS PAGE

← SeeV

+

Top 10 In-Demand Courses in 2024: Navigating the Educational Landscape of Tomorrow

[Read More](#)

BLOG 1

Test Blog

[Read More](#)

Crafting a Standout CV

Top Tips for generating a successful cv

[Read More](#)



CREATE BLOGS PAGE

← Add Blog

Title

Subtitle

Type your blog content...

Upload

CONCLUSION

- Our AI-powered CV tool is a groundbreaking advancement in recruitment and career development.
- Utilizes state-of-the-art natural language processing and machine learning techniques.
- This innovation transforms how candidates craft, customize, and enhance their resumes.
- The tool effectively addresses critical pain points in the job application process.
- It delivers substantial benefits for both candidates and employers alike.

REFERENCES AND RESOURCES

1. <https://www.indeed.com/career-advice/resumes-cover-letters/cv-formatt-guide>
2. <https://www.uml-diagrams.org/index-examples.html>
3. <https://docs.flutter.dev>
4. <https://firebase.google.com/docs/guides/>
5. <https://novoresume.com/career-blog/resume-statistics>
6. <https://www.forbes.com/sites/ashleystahl/2021/06/10/how-to-write-a-competitive-resume-in-2021/?sh=3967813e7724>
7. <https://www.fool.com/careers/2019/04/03/does-it-pay-to-use-a-resume-service-new-data-says.aspx>

1. <https://img-cdn-china-admissions.imgix.net/wp-content/uploads/2021/11/CV-for-A-chinese-University.jpg?auto=format%2Cenhance%2Ccompress>
2. https://cdn.pixabay.com/photo/2017/05/09/00/15/resume-2296951_1280.png
3. [https://www.investopedia.com/thmb/wtzEam1DrS2U3VgqoweCRaXzJ8O=/1500x0/filters:no_upscale\(\):max_bytes\(150000\):strip_icc\(\)/resume.asp-FINAL-7d61bbc8181747698b3cbb0b2ed6833e.png](https://www.investopedia.com/thmb/wtzEam1DrS2U3VgqoweCRaXzJ8O=/1500x0/filters:no_upscale():max_bytes(150000):strip_icc()/resume.asp-FINAL-7d61bbc8181747698b3cbb0b2ed6833e.png)
4. <https://www.springboard.com/blog/wp-content/uploads/2018/09/Cyber-Security-Resume-Examples-and-Tips-to-Get-You-Hired-scaled-scaled.jpg>
5. https://media.linkedin.com/dms/image/D5612AOGPC3XkOTIQFw/article-cover_image-shrink_600_2000/0/1686542256538?e=2147483647&v=beta&t=5tM012Rbffa0C612d6j15P5HViwdOyU6xA9w_ZtS0Z0
6. <https://turbologo.com/>
7. <https://www.promeai.com/image-variation>

IMAGE REFERENCES

**THANK
YOU**

Appendix B: Vision, Mission, Programme Outcomes and Course Outcomes

Vision, Mission, Programme Outcomes and Course Outcomes

Institute Vision

To evolve into a premier technological institution, moulding eminent professionals with creative minds, innovative ideas and sound practical skill, and to shape a future where technology works for the enrichment of mankind.

Institute Mission

To impart state-of-the-art knowledge to individuals in various technological disciplines and to inculcate in them a high degree of social consciousness and human values, thereby enabling them to face the challenges of life with courage and conviction.

Department Vision

Department Vision To evolve into a department of excellence in information technology by the creation and exchange of knowledge through leading- edge research, innovation, and services, which will, in turn, contribute towards solving complex societal problems and thus building a peaceful and prosperous mankind.

Department Mission

Department Mission To Impart high quality technical education, research training, professionalism and strong ethical values in the young minds for ensuring their productive careers in industry and academia so as to work with a commitment to the betterment of mankind.

Programme Outcomes (PO)

Engineering Graduates will be able to:

1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with ap-

appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and Team work: Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

10. Communication: Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Course Outcomes (CO)

Course Outcomes (CO)

Course Outcome 1: Make use of acquired knowledge within the selected area of technology for project development.

Course Outcome 2: Identify, discuss and justify the technical aspects and design aspects of the project with a systematic approach.

Course Outcome 3: Interpret, improve and refine technical aspects for engineering projects.

Course Outcome 4: Associate with a team as an effective team player for the development of technical projects.

Course Outcome 5: Report effectively the project related activities and findings.

Appendix C: CO-PO-PSO Mapping

Mapping of Course Outcome with Program Outcomes

CO - PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
1	3	3	3	3	3	3	3	3	-	-	-	3
2	3	3	3	3	3	-	2	3	-	3	2	3
3	3	3	3	3	3	2	3	3	-	2	3	3
4	3	3	2	2	-	-	-	3	3	3	3	3
5	3	-	-	-	2	-	-	3	2	3	2	3