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1. Introduction

1.1 About Project

In today's rapidly evolving professional landscape, there is a growing need for academic supervisors, students, and industry partners to collaborate on solving real-world problems. To address this need, we propose the development of a comprehensive Student Industry Project Management System, ProjectME. This system will serve as a bridge connecting students, academic supervisors, and industry partners, streamlining the process of identifying, matching, supervising, and assessing industry projects. By creating a centralized platform for collaboration, we aim to facilitate meaningful engagement between students and industry, enriching the learning experience and enhancing the practicality of education.

1.2 Project Purpose

Industry Partners have an interest in working closely with students to solve real-world problems. However, the process of connecting students with relevant industry project opportunities and efficiently managing the coordination between academic supervisors, industry partners, and students can be complex and time-consuming.

The goal of this project is to design and implement a Student Industry Project Management System to provide a platform to connect the three stakeholders - Students, Academic Supervisors, and Industry Partners, where a students can search and apply for real-world academic projects, where the projects are led by an industry partner and supervised by an academic supervisor.

- Project discovery – The ProjectME platform has a vast directory of real-world projects which the users can browse through and show their interest in the one's their skills and interests align with. The platform is not restricted to a single field of study, users from all field of interest can join, explore, and post their projects.
- Recommended projects – Based on the users' skills, the platform will recommend projects that are most suitable for the user.
- Project Management – For the industry experts, this platform will function as a project management tool, where they can manage the users involved in their projects.
- Project insights and feedback – ProjectME offers the functionality of progression logs and feedback with ratings for the users involved in the project.
- User security and privacy – With security being the top priority, we prioritise user data protection by ensuring personal information remains secure. Using authentication, data encryption and privacy controls, ProjectMe ensures security.

2. Overview

2.1 Dashboards

Individual dashboards are created for each stakeholder where they will be shown their relevant projects. This module will let them browse, view, search, and filter through the available projects. Each dashboard has three major elements – Top-bar, Sidebar, and content area, and will only be available after login or registration of the user.

Project container -

- All the available projects will be shown in a collapsible container.
- When collapsed, the container displays the project name, and the company of the industry partner who posted it.
- On clicking anywhere on the container, it uncollapses to display:
    - Location - Location where the project will be conducted.
    - Skills - The skills required or relevant for this project.
    - Category - The area under which the project will be placed.
    - Closes at - The deadline to apply for the project.
    - Short description - A brief description of the project.
- To access the detailed description of the project, the user needs to click on the name of the project. This page will show the project name, location and description. For students and supervisor, the apply button will be displayed. On the other hand,

Students –

- Students can view all the projects posted by all the industry partners on the platform.
- Each project posting is displayed in a collapsible field, which on expanding shows the location and short description of that project.
- On clicking the name of the project, the student will be navigated to another page where they will get the option to “Apply” for the project.
- The student can use the sidebar to navigate to different pages like Profile, Education, Personal projects, and Applied Projects.
- To log out, the student can use the log out button provided on the top-bar.

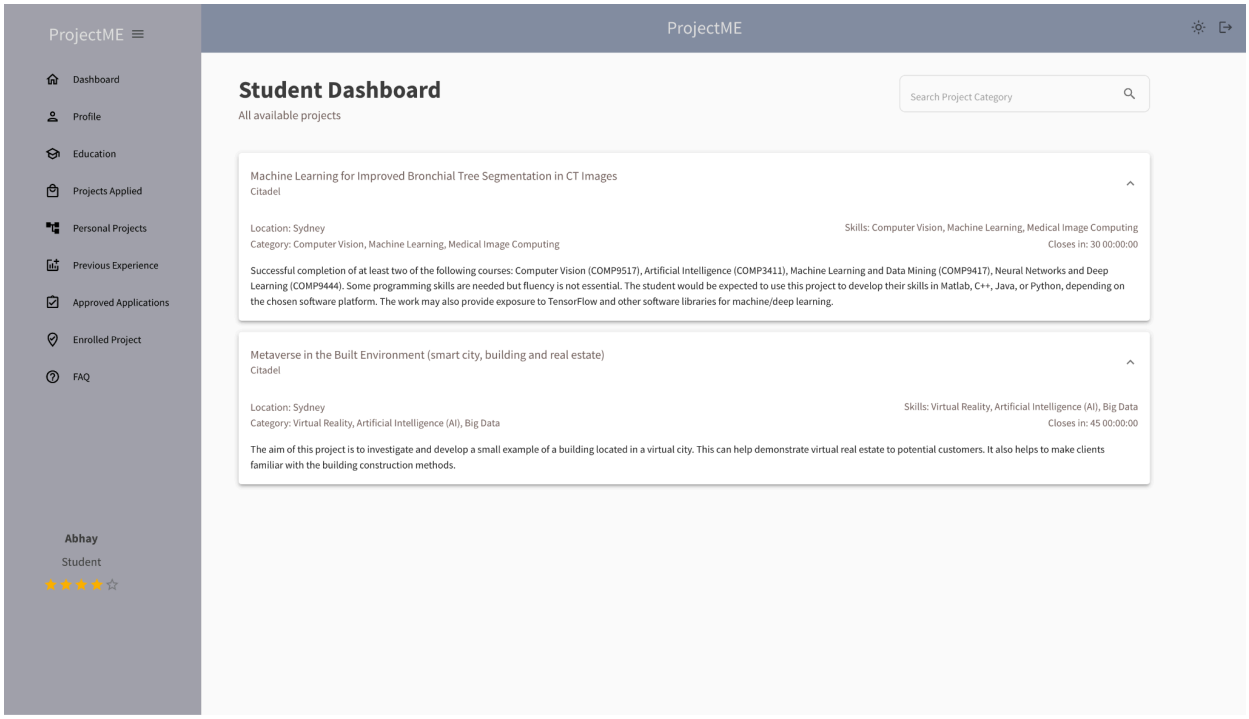
Industry Partner –

- Each industry partner has their personalised dashboards where they can view only their own posted projects.
- A partner can add a new project by clicking on the “Add new project” button, which will redirect them to a new page where they can fill the projects’ details like project name, description, skills required, and number of vacancies.
- Industry partner also has the option to edit or delete a project, by clicking on the project name and then clicking the respective buttons.
- The industry partner will be able to check, approve or reject applicants, change the project status and view the progress logs.

Academic Supervisor –

- Supervisors have the option to browse through all the available projects.
- Like a student user, a supervisor can apply for a project they are interested in.

We are using MaterialUI for styling all the components in frontend. This includes all the icons used for buttons as well.



2.2 Sidebar and Top bar

Sidebar and Top bar can be used to navigate to different pages and is available throughout the platform. Sidebar component is different for each user role, with a few common elements like Dashboard, Profile, FAQs, username, and user role. Sidebar component is collapsible and can be toggled using the hamburger button.

All users –

- Dashboard – Users can click on this button to navigate back to their respective dashboards.
- Profile – Users' personal information will be displayed here which they filled during the registration process. For students and industry partners, they can use this page to upload their resumes.
- FAQs – Users can view the frequently asked questions about the platform here.
- Username – Displays the logged in user's first-name.
- User Role – Displays the logged in user's role - Student, Industry Expert or Academic Supervisor.
- Ratings - Students and Academic supervisors will be rated by the industry expert upon completion of a project. The user gets rated on for each of the projects they have been a

part of, and for different aspects. The average star rating is shown on the side bar for the user.

There are additional elements available only to students and academic supervisors:

- Education – Students can register their academic qualifications which will be displayed to the industry expert when they show their interest in a project. This information will also be displayed to the student for review on the project apply page.
- Projects Applied - A user can apply for multiple projects, and has the option to withdraw from them. To locate the already applied projects, the user can navigate to this tab.
- Personal Projects - A user can upload their previously worked on projects for the industry experts to view with their application.
- Previous Experience - A user can also add their prior work experience to send through with their applications. This is where they can showcase their skills and how they will align with the applied for project.
- Approved Applications - When an industry expert approves an applicant, the user can view these projects on this page. A user can be approved for multiple projects, and has the option to accept one of those offers.
- Enrolled Projects - When a user accepts an offer, this project moves to the enrolled projects page. Here the user can access their progression logs, and the academic supervisor can post comments on these logs.

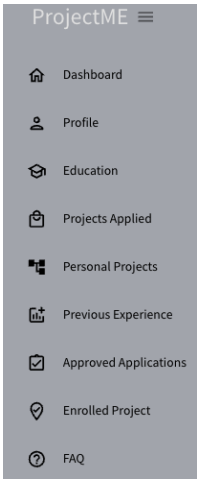
Elements available only to a specific user role:

Industry Partner –

- Browse all projects – An industry partner can also browse through all the available projects on the platform. But the user can not apply for them, or access their progress logs.

Supervisor –

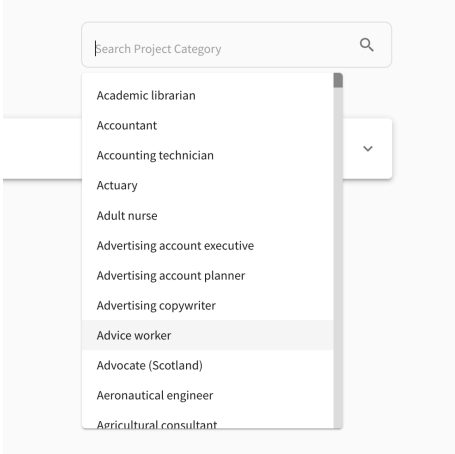
- Invite Industry Experts – If an academic supervisor comes up with an idea for a project and wants to invite an industry partner, they can view the list of available industry partners on the platform and invite them.



- It is a global component available across the platform, with the web application's name "ProjectME" in the center which also works as a button to navigate to the respective user's dashboard.
- On the top right side of the bar, users can use the "logout" button to sign out of the platform.
- Theme switch - ProjectME platform offers the functionality to switch between light and dark modes. The mode set by the user will be used across the whole platform, and can be switched back and forth anytime.

2.3 Search

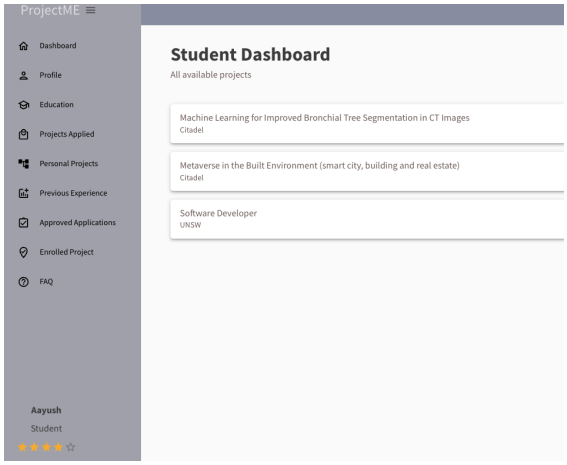
- The platform offers a category based "search" for all the users. On their respective dashboard where the users can browse and view jobs, the search bar is displayed on the top of the webpage.
- The search bar field suggests categories in a drop-down list. Even if a particular category does not exist in this drop-down list, a user can type in the word and search for that project category.

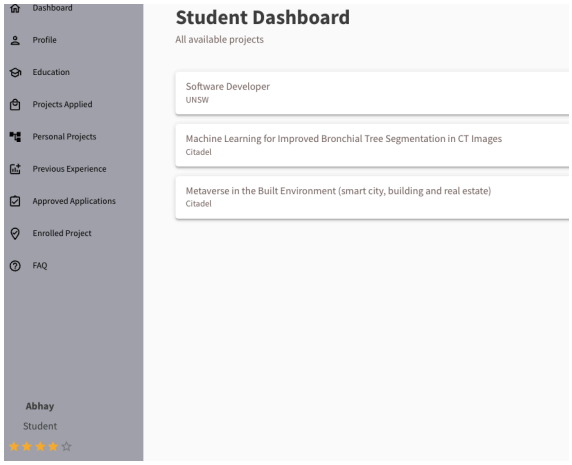


2.4 Recommendations

- Students are recommended relevant projects based on their resume
- If the user has not uploaded their resume, then they will see projects on their dashboard based on the ascending created time of the project
- The recommendations are created based on the project description and the resume of the user
- The similarity score is used to calculate the quantitative relation between the resume and the description of the projects
- The list of the recommended projects (generated using a cron job, more information in section 4.8) is stored in a database based on the descending order of the similarity score for each user

Below are the personalised dashboards of two different users (in this case both are students)





2.5 Progression log of students' project progress and feedback.

Key Features include:

- Students can post progression logs based on their deliverables, this functionality can be used to mark bugs as finished or deliverable progress review.
- Supervisors can see the progression logs and give appropriate feedback or help to the students using the Add Comment functionality. This will ensure collaboration amongst students and provide a collective sense of achievement of goals.
- Industry Partner can view the progress logs and comments to track the progress of development of the project from the ground up.

This option is only available once the student and supervisor applications are approved. Only approved users can see the logs. Moreover, the industry partner must set the project status to "Development" marking the start of a new phase in the project lifecycle. A student cannot view other students' logs due to privacy concerns on feedback reports.

2.6 Final Ratings

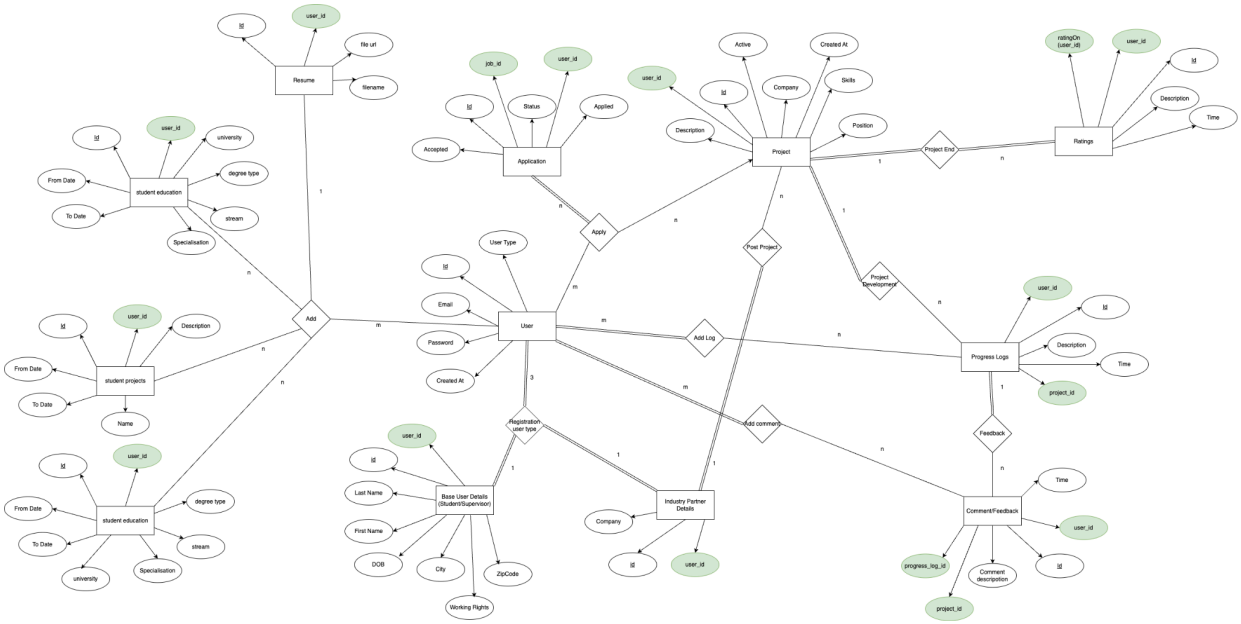
The key features are:

- Once the project status is marked as "End" by the industry partner. This is done once all deliverables are delivered. As part of final feedback, the ratings phase of the project starts where only the industry partner gets to rate all the personnel involved i.e. students and supervisors.
- The overall rating submitted by industry partners after a project determines the overall average rating of student/supervisor on their profile

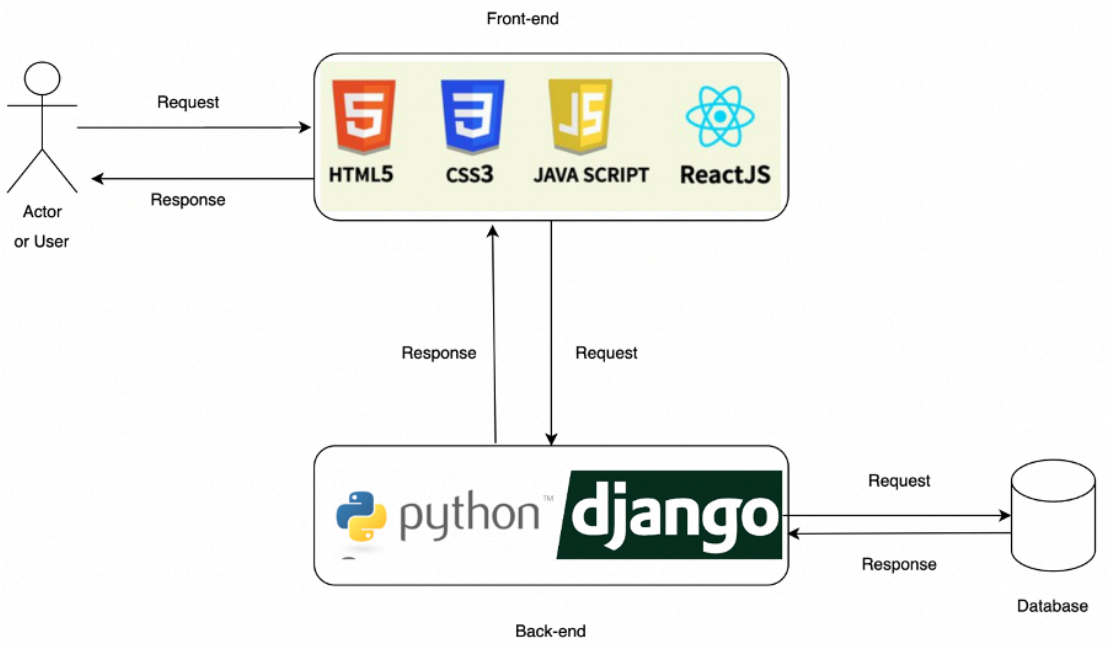
3. Diagrams

For full resolution images, visit this link.

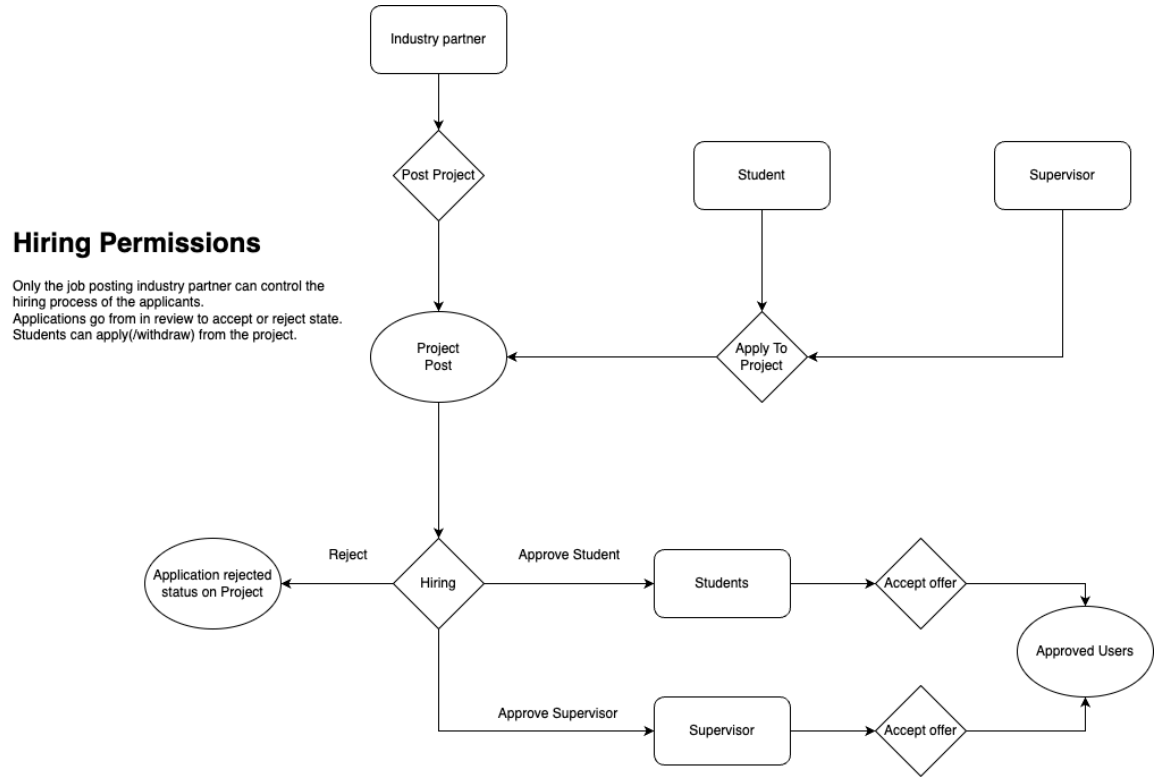
3.1 ER Diagram.

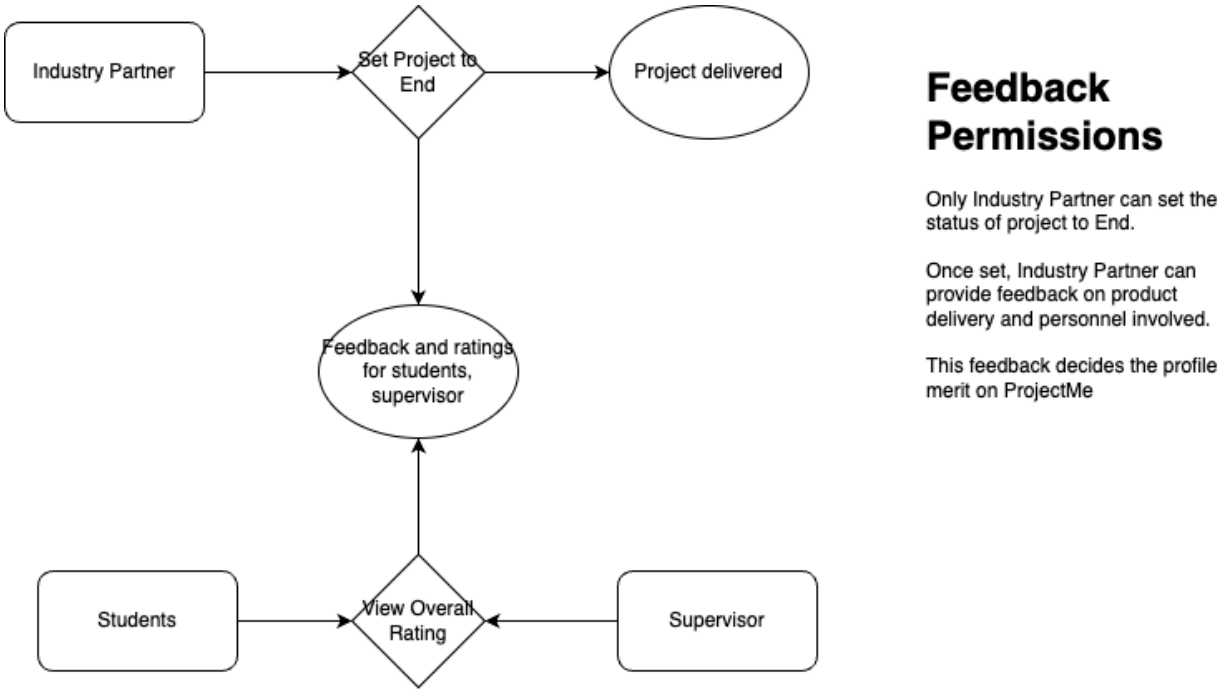


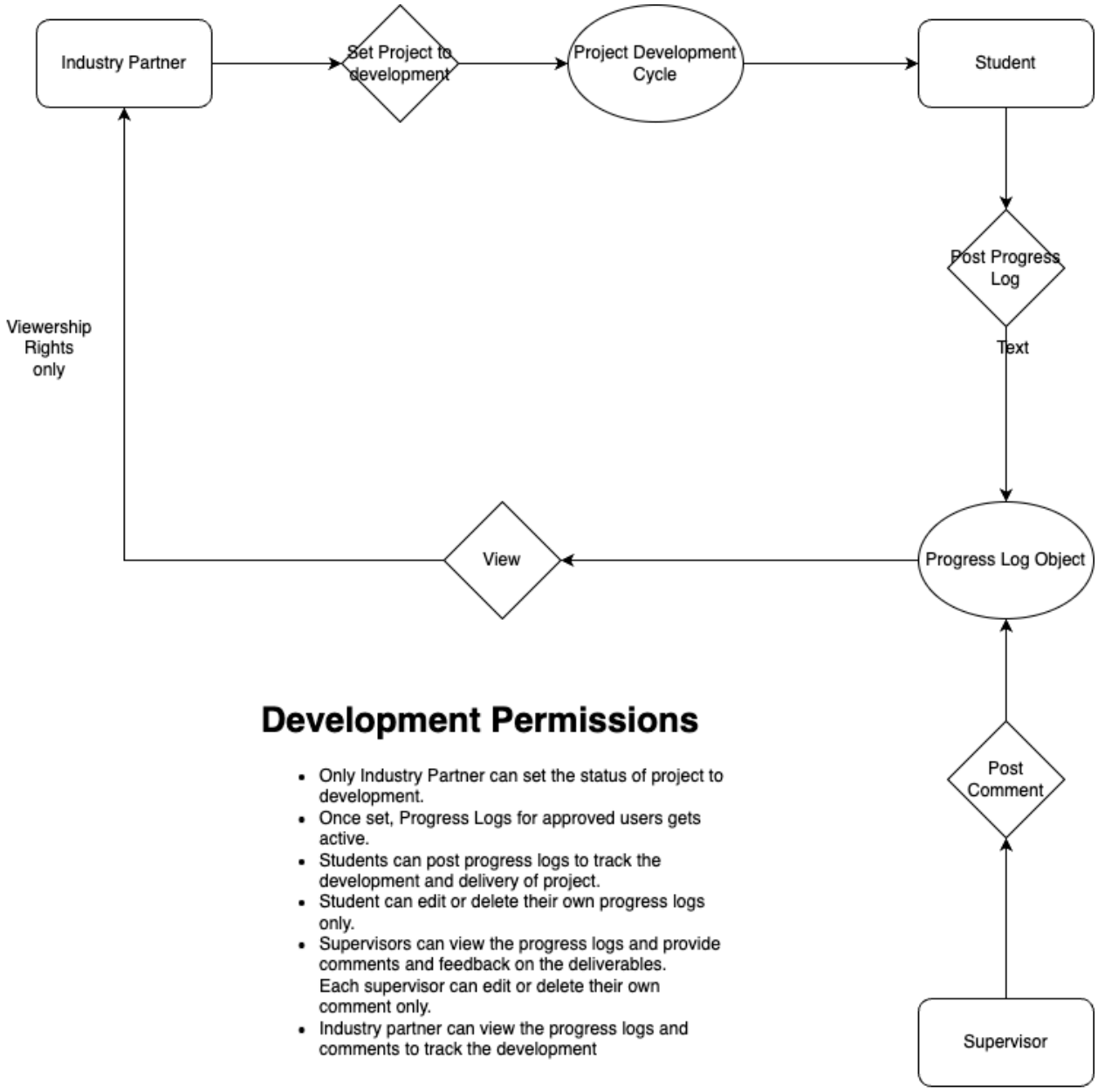
3.2 Software Architecture Diagram



3.3. Lifecycle







Development Permissions

- Only Industry Partner can set the status of project to development.
- Once set, Progress Logs for approved users gets active.
- Students can post progress logs to track the development and delivery of project.
- Student can edit or delete their own progress logs only.
- Supervisors can view the progress logs and provide comments and feedback on the deliverables. Each supervisor can edit or delete their own comment only.
- Industry partner can view the progress logs and comments to track the development

4. Functionalities

4.1 Registration

First time users will have to register before using any of the platform's functionalities. Each user type has a different registration form. Upon opening the web application, the login page is set as the landing page and a new user can click on the "Register" button to create their profile.

Upon clicking the "Register" button, the user is given the choice to create a profile as a 'Student', 'Industry Partner' and an 'Academic Supervisor'.

For all users –

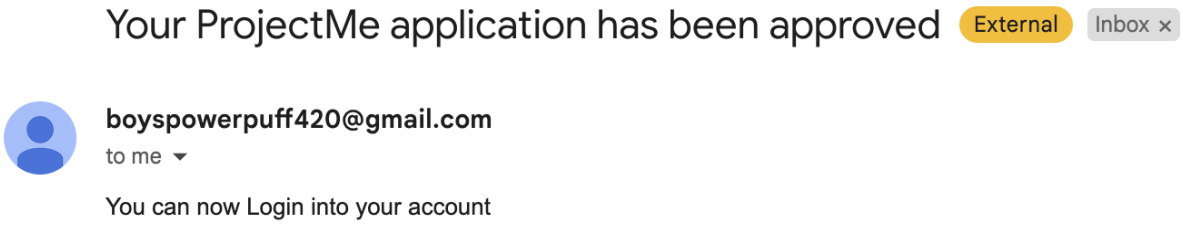
- First name and Last name are saved as a string.
- Fields are set as mandatory and validations are set so that the form is not submitted until all the required fields are filled.
- Validations are set on the email field to check if the email id format is correct.
- There are two fields for 'Password' to make sure user has entered their intended password and the user is notified if the passwords do not match.
- When the user enters their password, a special character is shown to maintain privacy and security.
- All the passwords are encoded on the backend to maintain user data security.
- Date picker is used to enter the users' date of birth.
- The city field is a drop-down list that will filter out as the user types a city name.
- Users are also prompted to enter their gender and zip code
- After registration is completed, access token is generated which is stored in the local storage of the browser

Student –

- A student will have to enter their working rights, as some projects might require full working rights.

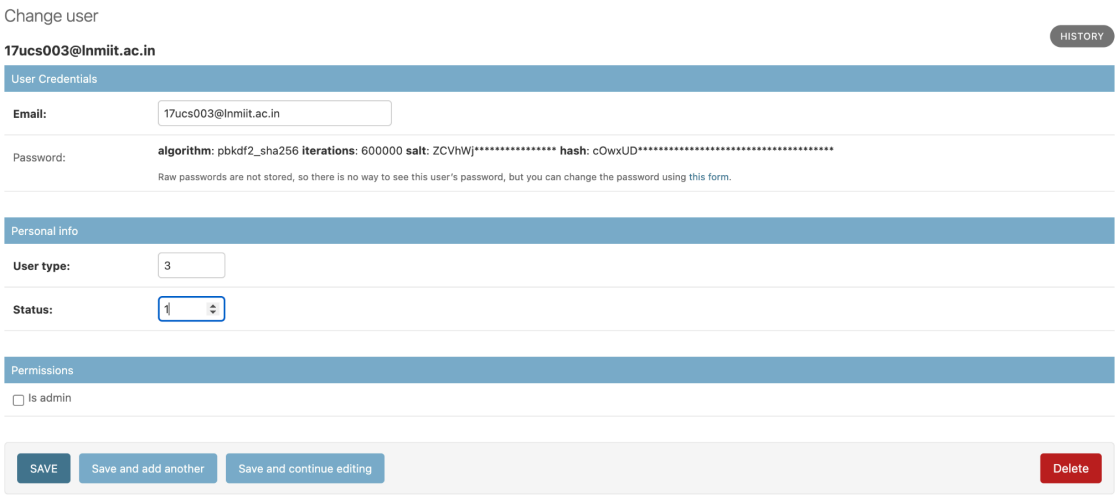
Industry Partner and Academic Supervisor –

- Upon registration, the Industry partner is prompted to enter their company name.
- After registration both the academic supervisor and industry partner will have to wait till their profiles have been approved by the admin.
- This step is done to ensure that these two roles are only given to authentic personnel.
- An email is sent to the user once they have been approved to use the platform.



4.2 Approve new users from the admin side

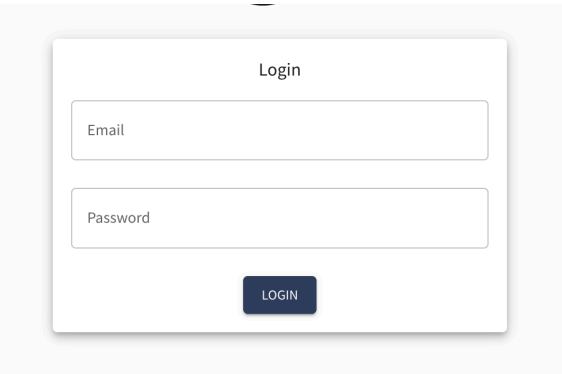
- To verify if an industry expert or academic supervisor[RK9] is genuine, after registration their profile is sent to the admin for approval.
- On the backend, the initial status of a user is set to 0 or “inactive”. Admin has the access to change it to 1 or “active”.
- The approved user would then receive an email notifying that they can now access the application
- Upon approval, the users can access their respective dashboards.



4.3 Login

Each user will login using their email and password which they had set up during the registration process. A student can log in and view all the available projects as soon as their registration form is submitted, whereas an. Industry experts and academic supervisors will have to wait till their registration is authorised by the admin. After successful login, the access token is generated and stored in the local storage

The access token is used for authorising and contains some important pieces of information about the user which are useful for determining the allowed functionalities for the logged-in user.



4.4 View/Update Profile

- Each type of user has the option to view and update their personal details in the “Profile” section. These are the details set up during the registration phase. The user can only have one resume, that is user cannot save multiple resumes.
- A user can access the profile section from the sidebar menu.
- Fields like full name, last name, and email are set as read-only. Whereas, the user has the option to update other information.

4.5 Posting a new project:

A user with the role of industry partner can only post a project on the platform, a student or an academic supervisor can only view and apply on those projects.

To post a project, an industry partner fills out a form where relevant fields are set with validations.

- Project title – Main heading of the project.
- Company – This needs to be the same as the industry partner’s company which they set during the registration.
- Location – This field uses an autocomplete dropdown, where a list of cities is given and is filtered as the user types a letter
- Skills required – Skills required for that project
- Number of vacancies – Total number of applicants that the partner is looking to hire
- Short Description – A brief of the project which will be displayed on the dashboard.
- Description – A detailed description of the project where all the technicalities are specified and this would be used to align/suggest students with projects (covered more in section 4.16)
- Closes at – The number of days after which the project post will close or the deadline for the project application. After the closing date, this project would be flushed out from the database and would not be visible to any stakeholder
- Category/Other requirements – Additional fields

4.6 View Project

Each user can view all the active and not yet started projects posted by all industry partners. Each project is shown in a separate collapsible container. When collapsed, the container only shows the name of the project and the company of the industry partner who posted this project. On clicking the container or the downward arrow, the location, skills required, and a short description are shown to the user.

Student and Academic Supervisor –

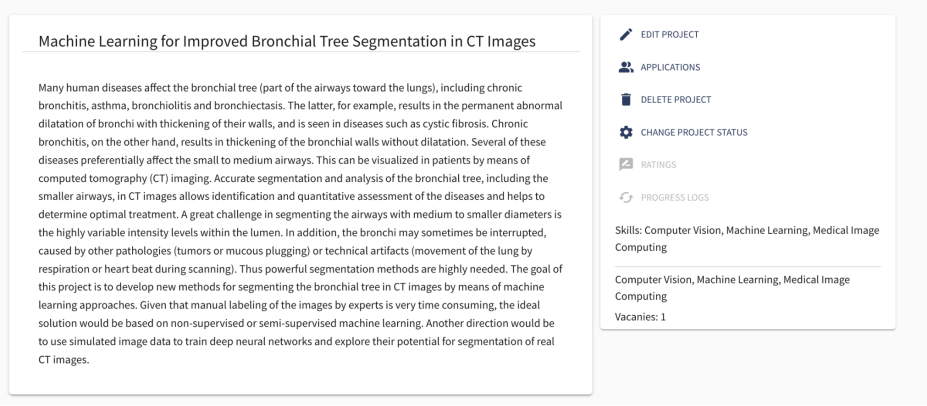
- These two types of users can view and browse through the active and not yet started projects on their dashboards.

Industry expert –

- On their dashboard, the user will be shown only the projects posted by them.
- To view and browse through all projects, the user can select “Browse projects” from the sidebar.

4.7 Edit/Delete a project:

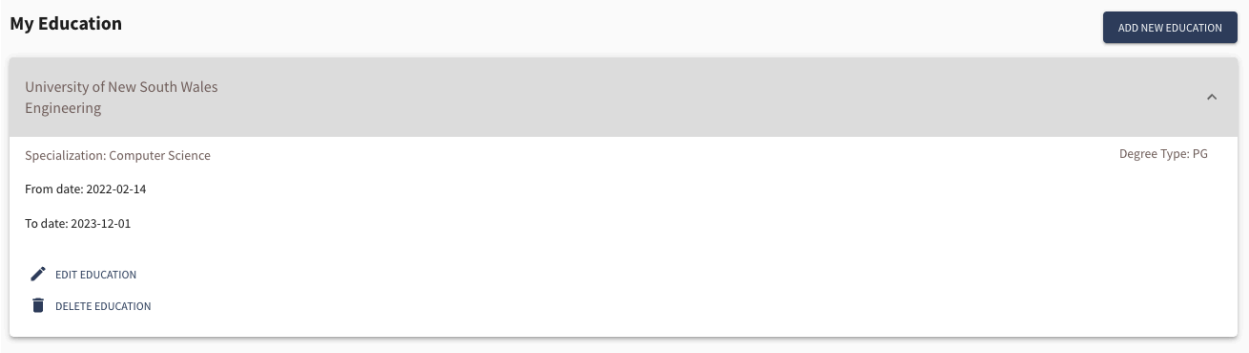
- Only the industry expert who posted the project has the option to edit or delete that project post.
- Upon clicking the “Edit Project” button, the user is taken to a form similar to the form for posting a new project. However, the fields are pre-filled and editable
- Upon clicking the “Delete Project” button, the user is prompted with a pop-up confirming if they want to delete the project or not, with a “Yes” and “No” button.
- If the user selects ‘yes’, the project’s entry is deleted from the database as well.



4.8 Add/Edit/Delete education details

- A student can add their education details on the “Education” page.
- When a student applies for a project, their education details are shown to the industry expert who posted the project.
- The user will have the option to select the university from the drop-down. If they are unable to find their university they can type the name of the university as well.

- The user is also prompted to select the stream from the drop-down list and based on the stream selected the options or drop-down values for specialisation will change.



4.9 Add/Edit/Delete previous personal projects

- Users with the role of student or academic supervisor have the option to add the projects they have previously worked on.
- After applying for a project, the industry partner who posted this project can view the student or academic supervisor's previous projects.

4.10 Add/Edit/Delete previous experience

- Users with the role of student or academic supervisor have the option to add their previous professional experience.
- After applying for a project, the industry partner who posted this project can view the student or academic supervisor's previous experience.

4.11 Resume upload

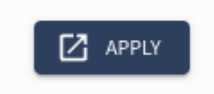
- Students and Supervisors have the option to upload their resume on the portal. This can be found under the “User Profile” section
- To upload the resume, the user has to choose the file using the “Choose File” option. The file has to be strictly in PDF format.
- The resumes are uploaded to the file storage system, in our case it is Amazon S3. As the expiration for any document in Amazon S3 is 7 days, and so to overcome this issue our system is generating new URLs with an extended expiration (7 days) whenever resumes are displayed or rendered.

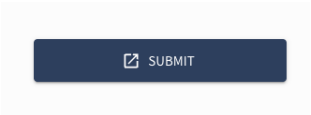
4.12 Apply

Users with student and academic supervisor roles can apply for multiple projects.

- Students and academic supervisors can demonstrate their interest by applying for projects suitable for them.
- Academic supervisors can also select the ones they feel best equipped to supervise

- To apply for a project, a user opens a project from their dashboard, and clicks on “Apply”
- After clicking on “Apply”, a new window is opened for applicant to review their information and when they click on submit the application is sent to industry partner for review
- Once applied the status is updated to “Under Review” (in the database).
- The industry partner gets the job profile and resume of the user and then approves or rejects their application
- If the user is rejected, they do not have the option to apply for the project again





4.13 Withdraw

- After applying for a project, a student or an academic supervisor has the option to withdraw their application
- The “Withdraw” button will be visible once the status of the application updates to “Under Review” (in the database)
- After clicking on “Withdraw”, the user again has the option to apply for the project

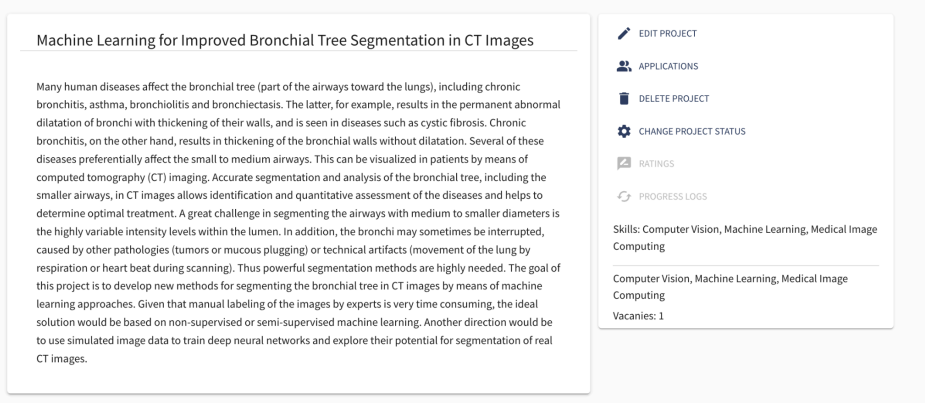
4.14 Accept/Reject application

- A student and an academic supervisor will have to apply for each of their desired projects. Students and supervisors won’t see the projects whose development has already started
- Only the industry expert for whose project the applicant has applied for can accept or reject the applications.
- Upon applying the applicant’s application’s status is set to “Under Review” (in the backend), only then the industry expert can change the status to “Accepted” or “Rejected”.
- If an applicant is rejected, they cannot reapply for the same project

4.15 Managing a project

Industry partners have the capability to manage all the projects posted by them individually.

- Upon clicking the project container, the user is taken to the project view page, which shows the details specific to that project, which includes the details shown in the dashboard container plus the detailed description and the number of vacancies.
- On this window, the user can:
    - Edit project
    - Delete project
    - View applicants who have applied for the project - including both the students and academic supervisors.
    - Change the project phase or status - Start, Development and End.



4.16 Project Phases

- Each project will have three phases –
    - oStart – When a project is posted and the industry expert is analysing the applicants.
    - o Development – After confirming the student/s and supervisor for the project, the industry expert responsible for that project will manually change the status to “In Progress”.
    - o End– Upon completion of the project, the industry expert updates the project status to completed or closed. Only after getting to this phase can an industry expert leave a rating and review for the student who worked on the project.

4.17 Progression Logs

Once the Project is set to the Development phase, the option of progress logs becomes active for all approved users.

- Only a student can post a progress log, which contains the description, time and writer information.

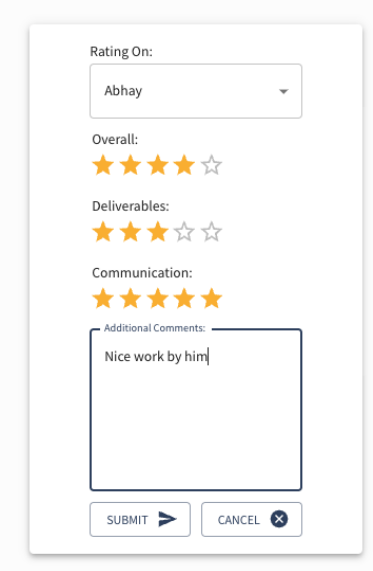
- A student can view other progress logs under the project as it is treated as a forum for progress tracking of deliverables.
- A student can edit/delete their own progress logs only.
- On delete, the progress log and its associated comments get deleted.
- A supervisor can view all the progress logs and get the option to comment as a form of providing feedback or help to the students.

4.18 Comments and Feedback

- Academic Supervisors can assess students' performance during the project period. This is done by evaluating deliverables, problem-solving skills, and overall contributions to the project.
- Feedback in the form of comments is added to the progress logs by the supervisor.
- A supervisor can edit, and delete their comment only.
- On delete, the comment attached to the progress log is deleted. (Progress Log is not deleted)

4.19 Ratings

- An industry expert can rate their experience of working with students and academic supervisors.
- The industry expert who is the owner of the project must set the status of the project to End to use the functionality of Ratings.
- This is the final feedback given to the project personnel i.e., approved students and supervisors.
- The overall rating given is averaged and displayed on user profiles of students and supervisors. This is a social parameter that can be seen by industry partners when they review applications.



4.20 Cron jobs

There are two cron jobs for scheduling tasks in our system

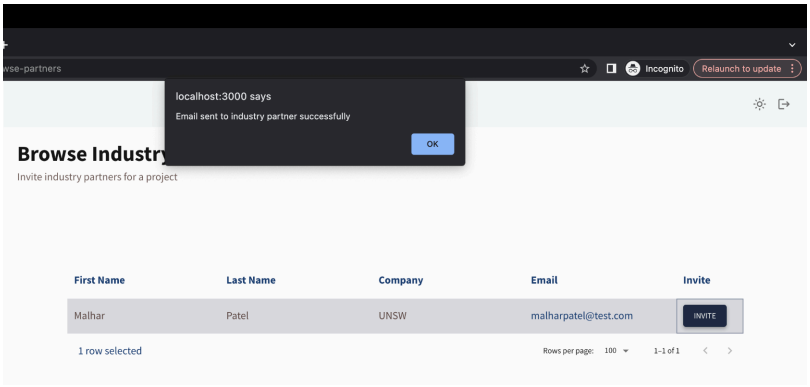
- First cron job is for flushing out or deleting the project postings which have become inactive as they have exceeded their closing date
- The second cron job is for recommending the relevant projects to students and supervisors based on their resumes. These projects are displayed on the dashboard in order of their similarity score with the user's resume. If the user has not uploaded their resume then all the available projects are displayed on the dashboard. More information about the matching of resume and project description is mentioned in section 4.16
  Both cron jobs are scheduled to run at 12 am-midnight, hence the dashboard of users will update after midnight every day.
- As Windows OS does not support crontab, students and academic supervisors will be displayed all the active projects. Whereas, this functionality works as intended on Mac OS.

Reasons for implementing cron jobs:

- The workload on the system for recommending relevant projects to supervisors and students can hinder the performance of the system, hence automating this task at a time when the load is low will make the system more available during heavy traffic.
- Provide an alternative way and flexible way of implementing computational heavy scripts.

4.21 Invite Industry Partner

- This functionality has been provided to academic supervisors
- Academic supervisors can send a pre-fabricated invite email to the industry partners
- Further communication between the supervisor and partner could be done on some other channel



4.22 Sign out

- By navigating to the top bar component, a user can sign out of the portal
- After signing out, the user is sent back to the landing or the login page
- The token is removed from the local storage of the browser after the user has signed out

5. Third-party functionalities

5.1 Amazon S3 File Storage

Amazon S3 an acronym for Amazon Simple Storage Service is offered by Amazon Web Services (AWS) which allows businesses to store objects through web service interfaces.

For our project, we have used the free tier offered by AWS S3 to store resumes uploaded by the users. The reasons for choosing S3 as a storage medium are:

- Highly available and durable
- A wide range of security features like bucket policies, access controls, and server-side encryption
- Easy to integrate and interact with the services offered through developer's APIs
- If the needs evolve, then S3 is easy to scale as per the needs

5.2 SMTP Setup

ProjectMe employs SMTP services to ensure that alerts, application updates, and notifications are sent to users' email lists quickly and efficiently. The software provides invitations to projects, and more via automatic email notifications. The SMTP configuration increases user interaction, promotes prompt communication, and fortifies the platform's dependability in providing professionals and businesses with vital project-related information. Since the project required us to keep up a Google account, the present SMTP setup uses the default Google Application SMTP.

6. Implementation Challenges

6.1 Internal team challenges

- Project scope - There were conflicts within the team with initial scope understandings and approach steps to be followed.
- Different skill levels - Team members had different skill sets and pace of learning new technologies and frameworks. This resulted in conflicts with code and overall software quality.
- Timeline pressure - The pressure to meet deadlines, managing milestones and time effectively caused stressful situations among team members.
- Communication - Communication gaps led to a lot of misunderstandings and misinterpretation of project deliverables.
- Feedback handling - Some team members had difficulty in handling and adhering to the feedback provided by other members.
- Blocks - Some user stories were delayed because they were dependent on other stories leading to delays.
- Inefficient backend implementation led to more bugs.

6.2 Development Challenges

- Learning curve - Learning new technologies and frameworks proved to be a good challenge for all the team members.
- Scalability - Challenges in database architecture that could ensure scalability of the platform to accommodate a large number of users.
- User Interface design - Creating a human centered user experience required careful and detailed testing and research, with a lot of iterations to accommodate changes.

7. Further Improvements

- Filters on dashboards and pages like progress logs to see the logs by a specific user.
- Resume parser that will parse the resume and fill in related user profile fields.
- Add a functionality to create deliverables under a project as user stories that can be individually tracked by the approved users and industry partner.
- Chat channels: Approved users can create channels for project chat to effectively coordinate with other users in delivering the project.
- This platform can integrate Recruiter profiles and Project managers as separate users for large scale organisation like project deliverability from hiring to management phases.
- Mining data to build better classifiers for recommender systems used and future ML Models.
- Push Notifications - Users to be notified of new comments on their progress logs, changes on their application status, or messages from their project managers.
- Search optimization for more categorical search.

8. Conclusion

ProjectME project was completed successfully achieving all the planned objectives in the initial scope. Proving to be a challenging learning curve, the project's major components - registration, user dashboards, profile management, project management and project recommendations were all implemented and integrated into the platform. Though there were challenges in user interface and database design, there is room for improvement in the platform. As a team, development of this project helped us understand the agile software development lifecycle.

9. Project Setup Manual

Preferably, test on a Mac OS by installing a virtual machine (if required).

9.1 Windows

- First Time setup:
    - Install VS Code and import/Open the project folder.
    - Environment setup for virtual environment and creation of virtual env: (Please run the below commands on cmd prompt)
        - *> pip install virtualenv*
        - *> python -m venv env*
        - *> env/Scripts/activate.bat*
        - *For VSCode powershell run the following:*
            - *Set-ExecutionPolicy -ExecutionPolicy Bypass -Scope Process -Force*
            - *>env/Scripts/Activate.ps1*
    - Installing required libraries for backend once virtual env is created. Also, please change directory into powerpuff folder using *cd powerpuff* before running the next command
        - *> pip install -r requirements.txt*
    - Backend DB Creation:
        - Navigate to powerpuff folder by using the command > *cd powerpuff*
        - Now the run the script for creating migrations and database tables using:
            - *>./win.bat*
        - If you dont see the migrations folders created under each subfolder of backend code, please run the following commands:
            - *pip install -r requirements.txt*
            - *python3 manage.py makemigrations auths*
            - *python3 manage.py makemigrations industry*
            - *python3 manage.py makemigrations student*
            - *python3 manage.py makemigrations application*
            - *python3 manage.py makemigrations progression*
            - *python3 manage.py makemigrations ratings*
            - *python3 manage.py migrate*

            - ***$ python3 manage.py crontab add {Not supported on windows due to absence of library: micropython-fcntl}***
    - Now create a superuser for approving supervisors and industry partners use
        - *>python3 manage.py createsuperuser*
        - You will be prompted to create super user (admin)
        - Enter the details, remember the details as it would be useful when approving industry partners and supervisors
    - Running the backend server:
        - *>python3 manage.py runserver*
    - Creation of Node Modules for FrontEnd:
        - Open a new terminal
        - Make sure that you are at the parent folder of the project
        - Navigate to student_indsutry folder by using the command > *cd student_industry*
        - Now the run the command: *>npm install*
    - To run the front end environment
        - *> npm start*

Note: DO NOT PUT '>' symbol while typing the commands, it is just to symbolise the current directory.

Crontabs don't work on windows OS, so project status will not automatically update every 24 hours.

To empty the database and rerun the commands in the backend DB Creation steps after the db file in powerpuff folder.

9.2 MacOS

- First time setup:
    - Install VS code and clone/open the project folder
    - For frontend:
        - Open terminal and navigate to ***student_industry*** folder using command ***$ cd student_industry***.
        - To confirm we install correct packages for React, we remove **node_modules** folder by using ***$ rm -rf node_modules*** command.
        - Also remove **package-lock.json** file if present by ***$ rm -rf package-lock.json***
        - Now reinstall React packages (node_modules) by running ***$ npm install*** **command**.
        - To run the ReactJS application use the command ***$ npm start.***
    - For backend:
        - Open terminal, make sure you are the parent folder of the project
        - Run the following commands:
            - ***$ cd powerpuff***
            - ***$ pip install virtualenv***
            - ***$ python -m venv env***

        - ***$ source env/bin/activate***
        - ***$ chmod +x setup.sh***
        - ***$ ./setup.sh***
    - You will be prompted to create super user (admin)
    - Enter the details, remember the details as it would be useful when approving industry partners and supervisors
    - After you have entered all the details, run: ***$ python3 manage.py runserver***
    - If all the above steps are not working, run the top most 4 commands as mentioned and then do the following:
        - ***$ pip install -r requirements.txt***
        - ***$ python3 manage.py makemigrations auths***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py makemigrations industry***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py makemigrations student***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py makemigrations application***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py makemigrations progression***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py makemigrations ratings***
        - ***$ python3 manage.py migrate***
        - ***$ python3 manage.py crontab add***
        - ***$ python3 manage.py createsuperuser***
    - You will be prompted to create super user (admin)
    - Enter the details, remember the details as it would be useful when approving industry partners and supervisors. Select user type as “4”, and status “1”.
    - After you have entered all the details, run: ***$ python3 manage.py runserver***
    - If you see a runtime error related to cron jobs, “***It seems the crontab is out of sync with your settings.CRONJOBS”***
        - Then run ***$ python3 manage.py crontab add***

9.3 Common operations after running the servers

After running the backend and frontend servers:

- Backend server will run at 8000 port, please make sure that this port is not used by any other service
- Frontend server will at 3000 port, please make sure that this port is not used by any other service
- Whenever you register any industrial partner or academic supervisor, go to *‘**localhost:8000/admin**’*, login using the details you inputted while creating super user

- Go to *'**Users**'*, select the user you created based on the email, set its status to 1 and the click on Save

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