

ATTENDANCE AUTOMATION SYSTEM

DELIVERABLE 5

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DELIVERABLE 5

AGENDA

- Project Overview
- MVP
- Technologies Used
- Completed Features
- System Architecture
- User Stories
- Product Backlog
- Test Cases
- Sprint Backlog
- Retrospective

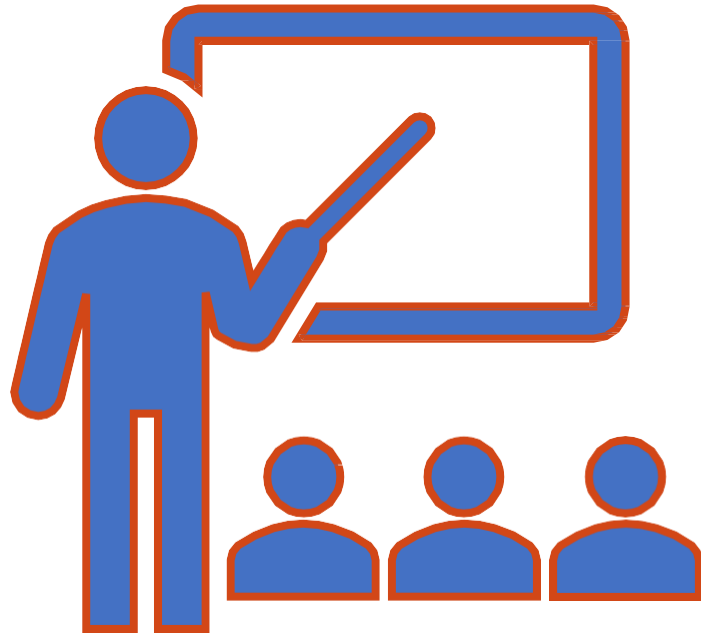


PROJECT OVERVIEW

- The main purpose of this application is to replace the manual attendance method and human interference which consumes a lot of time and effort to maintain the student attendance.
- In our application we will be using face detection technique by machine learning algorithm to automate the whole process of managing the attendance in educational institutions.
- Our application uses the camera to capture the image and will compare with image in the student database and finally attendance will be recorded.
- Instructor will receive an email with a list of students who are absent.
- This will reduce manual errors and all the consolidated student attendance data will be available in the database which will make it easier for instructors to manage the student attendance.



MVP (PROJECT DEMO)



- Which problem does this application solve ?
- It will replace the manual attendance method with automated attendance by using face detection technique and it will make the life easier for educational institutions, Instructors and students and it will save a lot of time with the help of this tool.
- Minimum: A tool which provides a platform for the educational institutions and instructors to view student details.
- Viable: A platform for all the instructors and various institutions which enables them to create their profile, add the student details into the database and capture the students attendance by clicking a picture or by uploading an image and receive an email alert with the list of students absent during the class and get the consolidated attendance data.
- Minimum Viable : A Platform which makes the life easier for the instructors and institutions to manage attendance records of the students by saving a lot of time



PERSONAS

About Professor David,

- David is a 55-year-old professor who teaches Information Systems at Pace University, with packed teaching schedule I find it difficult to call out everyone's name and maintain a track of it

What can we do ?

- David can make a one-time effort of registering the students to the Attendance Automation System tool which will automatically mark the attendance of all the students present in the class and keeps a track of all the classes



PERSONAS

About Professor Raya,

- Raya is a 35 years old Professor at Physics teacher at Pace University. I manually take the attendance for all my classes and don't keep a track of and accidentally one of the student was marked absent, he came back to me saying he was present for the class I couldn't verify it as I don't keep a track of it.

What can we do ?

- Raya can register all the students to the Attendance Automation System and track with separate login details for the faculty and emails after every class.



TECHNOLOGIES USED

- PYTHON
- PYQT-5 GUI TOOLKIT
- HTML
- CSS
- JAVASCRIPT
- MYSQL

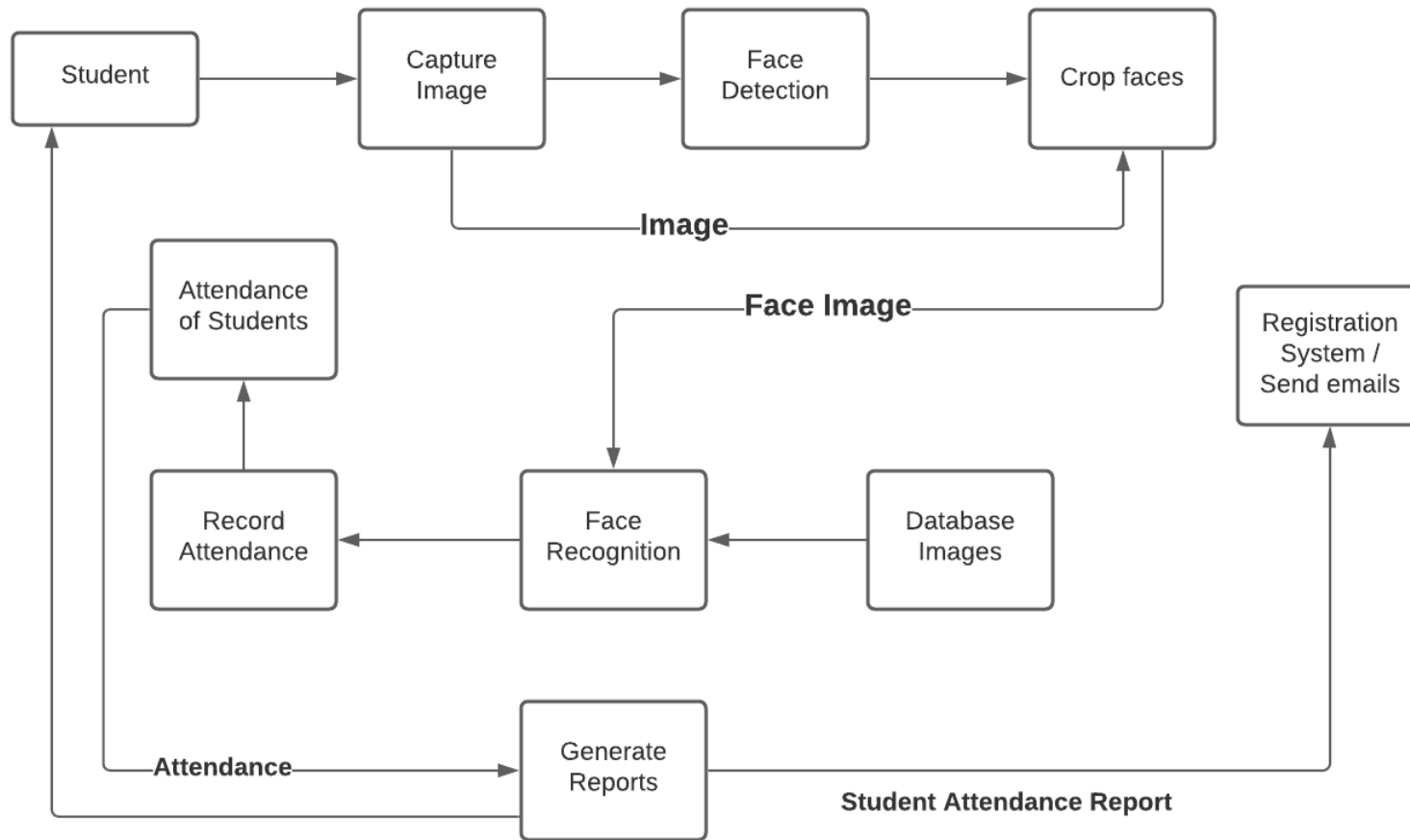


COMPLETED USER STORIES

US ID	As a	I want to	So that	Functionality
1	User	View the options available for Admin/ Faculty to login	We can choose if our school admin or the faculty wants to login with necessary credentials	Home Page
2	User	A secure login account with username and password for Admin and Faculty individually	Our personal credentials are safe and secure denying access to unauthorized persons	Login Page
3	Developer	Design a Database where we store all the user data (Admin, Faculty and Student private data)	Users can store their confidential data with necessary restrictions	Database
4	User	To add and view student data along with checking reports	I can add or delete any student when required and will be able to check student report.	Admin Page
5	User	Login in page for existing faculty members. Once logged in, taking attendance and comparing reports	Faculty can login and check the report after each class and will be able to verify all the previous class data	Faculty Page



SYSTEM ARCHITECTURE



USER STORIES

US ID	As a	I want to	So that	Functionality	Date	Priority	Story Points
6	Faculty	Register and create login authentications for faculty	Allow faculty to view options to capture attendance/browse picture to upload/ view previous reports after login	Faculty Registration and Login authentications	1/27/2021-2/12/2021	1	5
7	Faculty	View options available to capture/ browse an image to upload after login to the application	I can either use a camera to capture the attendance live or use an existing image to upload and submit attendance	Capture attendance/Browse image to upload	2/13/2021-2/20/2021	1	8
8	Admin	Check the students who have been successfully registered in the database	I can immediately view the student's registration information in the GUI console itself after login to application	Display registered students in the GUI console	2/23/2021-TBD	1	8
9	Admin/ Faculty	Check if the student's name is displayed once the application detects the face of the students	I can submit the attendance to generate the Student's registered photo data	Detect the students face	TBD	1	8
10	Admin/ Faculty	View students who are present/ absent	I can check the consolidated student attendance data	Generate attendance reports	TBD	2	5
11	Faculty	Receive an email immediately after the attendance is submitted	I can easily find students who are absent for the class.	Send automatic emails to the registered faculty	TBD	3	5

PRODUCT BACKLOG

PB ID	Product Backlog Items	User Stories	Priority	Story Points
6	Faculty Registration and Login authentications	As a Faculty, I want to view options to capture attendance/browse picture to upload/ view previous reports after login	1	5
7	Capture attendance/Browse image to upload	As a Faculty, I can either use a camera to capture the attendance live or use an existing image to upload and submit attendance	1	8
8	Display registered students in the GUI console	As an Admin, I should be able to view registered student's information in the GUI console after login	1	8
9	Detect the students face	As a Faculty/ Admin, I want to detect the students face and update student attendance	1	8
10	Generate attendance reports	As a Faculty/ Admin, I want to view attendance reports generated after the student attendance is updated	2	5
11	Send automatic emails to registered faculty	As a Faculty, I want to receive an email immediately with the list of students who are absent	3	5



TEST CASES

US ID	Scenario	Test Case	Expected Result	Actual Result
6	Faculty Registration	Enter all the required fields name, email id, password, phone number	- User should be able to successfully register and display successfully registered message	Pass
6		Fields should not be empty and All the fields need to be provided to successfully register	Display fields cannot be empty if any field is not entered successfully	Pass
6	Faculty Login	Sign in using the valid username and password provided During registration	- User should be able to successfully login with their credentials	Pass
7	Faculty options Page	Immediately after login faculty should be able to see options to capture attendance/ browse image to upload options	- Display capture attendance/ browse image to upload options to faculty after the sign in	Pass
7		Should be able to click on capture attendance icon to open the system camera	- System camera should be invoked and able to capture the image	Pass
7		Should be able to click on image upload to browse an image available in the system	Display files available to upload an image available in the user's system	Pass

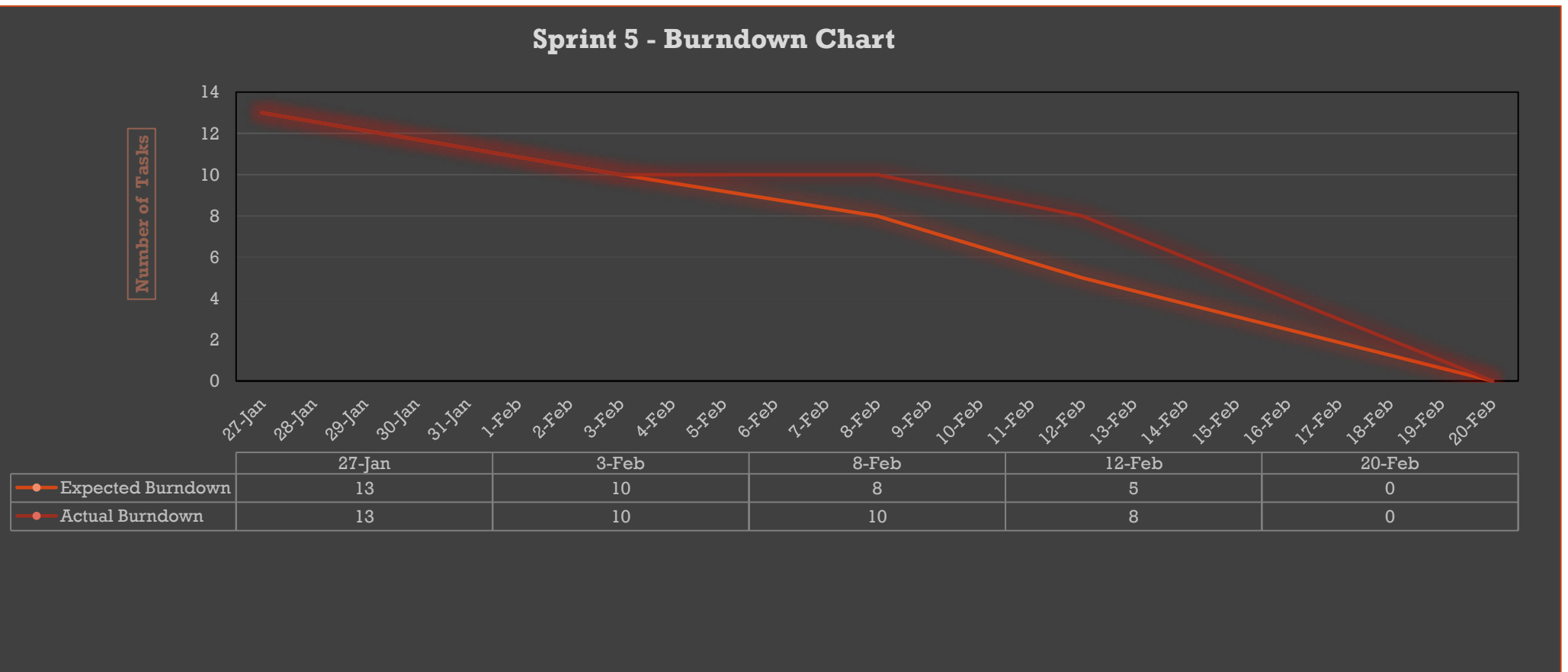


SPRINT BACKLOG

US ID	Sprint Task	User Stories	Priority	Issue Encountered	Start Date	End Date	Status	Task Points
6	Task 1	Faculty Registration authentications	1	None	01/27/2021	02/03/2021	Completed	3
6	Task 2	Faculty Login authentications	1	None	02/04/2021	02/08/2021	Completed	2
7	Task 3	Create faculty options page	1	None	02/08/2021	02/12/2021	Completed	3
7	Task 4	Linking faculty options page to provide options to Capture image/ browse image to upload	1	None	02/13/2021	02/20/2021	Completed	5



SPRINT 5 - BURNDOWN CHART



SPRINT 5 - RETROSPECTIVE

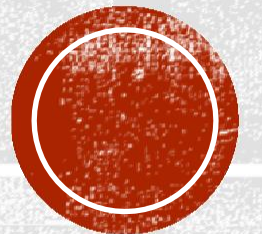
What went well		What can be improved	Action Items	
Team collaboration was great	We had much better planning than previous sprints	Need more team meetings to resolve issues on priority	Schedule a better availability window for team meetings	Start developing the machine learning algorithm to detect student face
Successfully completed the planned activities on time				



Project Demo

GIT HUB LINK:

[HTTPS://GITHUB.COM/ASHISHPULLURI/ATTENDANCEAUTOMATIONSYSTEM/WIKI/ATTENDANCE-AUTOMATION-SYSTEM#TEAM-2](https://github.com/ASHISHPULLURI/ATTENDANCEAUTOMATIONSYSTEM/wiki/ATTENDANCE-AUTOMATION-SYSTEM#TEAM-2)





THANK YOU