

Final Project for  
SW Engineering CSC648/848 Spring 2021  
Section 02, Team04

## **PipeWave**

*"The Fast-Track from Student to Professional"*

Team Lead/Front End: Jennifer Finaldi,  
Team Lead Email: jfinaldi32@gmail.com  
Database/Back End: Robert Cacho Ruiz  
Front End: Kevin Danh  
Back End: Jahir Hernandez  
Github: Anthony Nguyen

Demo URL: <http://35.235.77.107>

Date-- 05/11/2021

## **1) Product summary:**

### **Name of Product: Pipewave**

- Diverse signup form depending on occupation
- Professors able to rate a student based on their talents
- Users of industry occupation are granted Alerts
- Customize and edit profile for:
  - Students
  - Professors
  - Industry individuals

#### Functional Priority 1 Requirements -

1. *All users* from sfsu or companies shall be able to register and create accounts on the website
2. *All users* shall be able to update their profile information
3. *All users* shall be able to view other's profiles
4. *Students* shall be able to upload resumes to their profile in a pdf format
5. *Students* shall be able to enter any demographics to customize their profile
6. *Industry Professionals* shall be able to search for new graduates or students by major and demographics
7. *Industry Professionals* shall be able to register and get alerts for matching student or new graduate profiles
8. *Industry Professionals* shall be able to leave recommendations on students or graduates
9. *Professors* shall be able to enter recommendations/reviews for students

Our product includes a unique feature that allows industry users and professors to filter their search results of students' cultural backgrounds and identity. This grants more opportunity for people of cultural backgrounds or unique identities to be widely represented within the workspace of a company. While our regular search function returns results that match to what keywords you enter, the advanced search with selectable filters provides more depth to what cultural background, identity, and major you are looking for.

**Demo URL: 35.235.77.107**

## 2) Screen Shots of actual final product as shown in the demo, one per page:

Home Page:

The screenshot shows the home page of a web application named "pipewave". The header includes a "Not Secure" warning, the IP address "35.235.77.107", and a logo. A banner at the top reads "\*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*". The main content area displays a list of user profiles in a grid format. Each profile card contains a small profile picture, the user's name, and their major. The users listed are: Tonald Drump (Major: Business), Jennifer M Finaldi (Major: Computer Science), Kev BOI (Major: Mathematics), Hombrero (Major: Nuclear Physics), Super Fresh (Major: Computer Science), and bobo. Below the grid, there are two columns of descriptive text. The left column discusses the purpose of the website, stating it connects employers with potential employees by displaying resumes. The right column details the technical stack used, mentioning Google's NLP, OAuth 2.0, Notivize's Simple Mail Transfer Protocol, and Pdf-parse.

The Talent Pipeline website has existed for n days and has constructed a simple website where users can look at each other's resumes. Our objective is to connect employers with potential employees who have posted their resumes on our site. You can easily view a user's resumes simply by clicking on their profile. If you like a user's resume, you can email them for potential employment.

The Talent Pipeline website uses

- Google's Natural Language Processing's Entity extraction AI using the Google Cloud Platform
- OAuth 2.0 protocol with Google accounts
- Notivize's Simple Mail Transfer Protocol to notify users that they have created an account with us
- Pdf-parse, a simple JavaScript library to extract text from pdfs for Google's NLP

## Home Page with "Advanced" filters exposed:

The screenshot shows the pipewave home page with an "Advanced" search interface. At the top, there is a search bar and an "Advanced" button. Below the search bar, there are three filter sections: "Ethnicity" (African-American, Hispanic, Asian, Latin, Pacific Islander, Indigenous, White, Other), "Gender" (Male, Female, Non-Binary), and "Major" (Computer Science, Engineering, Mathematics, Communications, Business). A "Search" button is located at the bottom right of the filter area. Below the filters, a list of user profiles is displayed in cards:

- Tonald Drump  
Major: Business
- Jennifer M Finaldi  
Major: Computer Science
- Kev BOI  
Major: Mathematics
- Hombrero  
Major: Nuclear Physics
- Super Fresh  
Major: Computer Science
- bobo

At the bottom of the page, two columns of text provide information about the website's purpose and technology stack.

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## Search Results for "White+Female+Computer Science", without using text field:

The screenshot shows a web browser window for the pipewave website. The URL bar indicates a non-secure connection (Not Secure) at 35.235.77.107. The page title is "SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*". The header includes links for Home, About, Oaky, and Logout. The main content area features a search form with a "search" input field and an "Advanced" button. Below the search form are three filter panels: "Ethnicity" (African-American, Hispanic, Asian, Latin, Pacific Islander, Indigenous, White, Other), "Gender" (Male, Female, Non-Binary), and "Major" (Computer Science, Engineering, Mathematics, Communications, Business). A "Search" button is located at the bottom right of the filters. A user profile card for "Jennifer M Finaldi" is displayed, showing a yellow emoji profile picture and the text "Major: Computer Science". At the bottom of the page, there are two columns of text: one about the website's purpose and another listing its technical stack.

Not Secure | 35.235.77.107/?ethnicity=white&gender=female&major=Computer+Science

pipewave

\*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*

Home About Oaky Logout

search Advanced

Ethnicity

- African-American
- Hispanic
- Asian
- Latin
- Pacific Islander
- Indigenous
- White
- Other

Gender

- Male
- Female
- Non-Binary

Major

- Computer Science
- Engineering
- Mathematics
- Communications
- Business

Search

Jennifer M Finaldi  
Major: Computer Science

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With an Industry Professional account, users can get Alerts notifications in your navigation bar on the home page, characterized by a green dot next to the Alerts link:

The screenshot shows a web application interface for a software engineering project. At the top, there's a header bar with browser controls, a 'Not Secure | 35.235.77.107' message, and various icons. The main navigation includes 'Home', 'About', 'NPOSally', 'Alerts' (which has a green notification dot), and 'Logout'. The logo 'pipewave' is on the left, and a search bar with 'GO' and 'Advanced' buttons is above the user list.

The central part of the page displays a list of six user profiles in a grid:

- Tonald Drump  
Major: Business
- Jennifer M Finaldi  
Major: Computer Science
- Kev BOI  
Major: Mathematics
- Hombrero  
Major: Nuclear Physics
- Super Fresh  
Major: Computer Science
- bobo

Below the user list, there are two columns of descriptive text:

The Talent Pipeline website has existed for n days and has constructed a simple website where users can look at each other's resumes. Our objective is to connect employers with potential employees who have posted their resumes on our site. You can easily view a user's resumes simply by clicking on their profile. If you like a user's resume, you can email them for potential employment.

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The Alerts page for Industry Professionals allow an individual to view current alert setup, create or modify an alert, and view relevant talent accounts in the order of newest created profiles first:

The screenshot shows a web browser window with the following details:

- Address Bar:** Not Secure | 35.235.77.107/alerts
- Page Title:** pipeWave
- Header:** \*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*, Home, About, NPOsally, Logout
- Main Content:**
  - Alerts Section:** Get alerts for talent that meets your needs. A "My Current Alert" box shows "asian". A "Create or Modify Alert" button is present.
  - Filter Options:** Ethnicity (African-American, Hispanic, Asian, Latin, Pacific Islander, Indigenous, White, Other), Gender (Male, Female, Non-Binary), Major (Computer Science, Engineering, Mathematics, Communications, Business). A "Save Alert" button is located next to the filters.
  - Recent Alerts:** A list of four recent talent profiles:
    - Super Fresh: Major: Computer Science
    - Kevin Danh: Major: Computer Science
    - Alicia Li: Major: Mathematics
    - Anthony Nguyen: Major: Computer Science
- Footer:** The Talent Pipeline website has existed for n days and has constructed a simple website where users can look at each other's resumes. Our objective is to connect employers with potential employees who have posted their resumes on our site. You can easily view a user's resume.
- Footer:** The Talent Pipeline website uses
  - Google's Natural Language Processing's Entity extraction AI using the Google Cloud Platform
  - OAuth 2.0 protocol with Google accounts
  - Notivize's Simple Mail Transfer Protocol to notify users

The talent account dashboard allows for customizing a short biography, upload a new profile picture, and access other dashboard tools such as resume, reviews, and settings:

The screenshot shows a web browser window for the pipewave platform. The URL is 35.235.77.107/user/jennifer. The page title is "pipewave". The top navigation bar includes links for Home, About, jennifer, and Logout. A red banner at the top states "\*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*".

The main content area displays the user's profile information:

- Name:** Jennifer M Finaldi
- Major:** Computer Science
- Email:** jfinaldi32@yahoo.com

A "About Me" section contains the bio: "This is me updating my bio but before clicking the save button!" with a "Save" button below it.

A "Edit Bio" button is located above the bio input field.

A "Upload Photo" section features a circular profile picture of a woman named "jennifer". Below it is a file input field: "Choose File No file chosen" and a "Save" button.

Below the photo are three blue buttons: "Resume", "Reviews", and "Edit Settings".

The background of the dashboard features a landscape illustration with mountains, trees, and birds.

If a student account views their own resume page, they will find a form to upload a resume. For all other users, they will see only the resume on the page:

The screenshot shows a web browser window with the URL [35.235.77.107/resume/11](http://35.235.77.107/resume/11). The page has a header with the pipewave logo and navigation links for Home, About, jennifer, and Logout. A red banner at the top reads: "\*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*". Below the banner, there is an "Upload Resume" section with a "Choose File" button and a "Save" button. The main content area displays a resume for Jennifer Finaldi. The resume includes:

- Jennifer Finaldi**  
Email: jfinaldi32@gmail.com  
Phone number: 9512643214
- EDUCATION**
  - Bachelor of Science in Computer Science** Expected Graduation: December 2021  
San Francisco State University GPA: 3.97
    - Coursework: Software Development (C++, C, Java), Embedded Systems (Linux, C Programming, Raspberry Pi GPIO), Programming Methodology (Java, C++), Operating Systems, iOS Development (Swift), User Interface Design (Java)
    - Dean's List: Spring 2020, Fall 2019
  - Associate of Science in Computer Science** Graduation: December 2018  
Diablo Valley College GPA: 4.00
    - Achievements: Presidential Scholar Award
  - Associate of Science in Mathematics** Graduation: May 2019  
Contra Costa College GPA: 3.14
    - Achievements: Dean's List (2017), Honors, Alpha Gamma Sigma member
  - Certifications:** Diablo Valley College completed on: Dec 2018
    - Program Design, Advanced C++ Programming, Computer Architecture
- TECHNICAL SKILLS**
  - Languages: C++, C, Java, Python, Swift, Assembly. Databases: MySQL.
  - Architectures: MVC. Programming: Object Oriented, Procedural.
- WORK HISTORY**
  - Peer-Led Team Learning Tutor** San Pablo, CA  
Contra Costa College Jan 2019 - Jul 2019
    - Subject: C++ Programming, Calculus II, Descriptive Physics.
    - Worked closely with students to improve skills through carefully tailored lesson plans.
    - Attended lectures in order to create study sessions that directly related to coursework.
    - Recorded reported program enhancement data
- PROJECTS**
  - Custom File System** link: [github.com/jfinaldi/filesystem-project](https://github.com/jfinaldi/filesystem-project)
    - Project load, Shell Interfacing
      - Design and implement a file system similar to the Linux file system.
      - Establish milestones, assign tasks, organize regular team meetings, ensure the meeting of deadlines.
      - Meet basic functionality requirements, along with additional features such as dynamic extend memory allocation and defragmentation.
      - Understand the file structure and implement all routines and subroutines.
      - Interface the shell command system with the file system in order to create, delete, and manipulate files.
  - Contact Tracing IOS Application** link: [github.com/jfinaldi/CSC648-Term-Project](https://github.com/jfinaldi/CSC648-Term-Project)
    - Front-End Lead
      - Application to manage contact tracing during the Covid-19 pandemic.
      - Used Swift Storyboards to create a user interface.
      - Implemented the UI connections by creating the view controller to interface with the view and the model.
  - Device Driver** link: [github.com/jfinaldi/device-driver](https://github.com/jfinaldi/device-driver)
    - A Simple Virtual Authenticator Dongle with Login
      - Character-based device driver.
      - User program generates a random key, then has three minutes to enter the key to "log in".
      - Designed to mimic the behaviors of two-factor authentication without using hardware, operating in kernel space.

Those logged in as professors or industry professionals have the opportunity to leave personalized reviews on a student's reviews page:

The screenshot shows a web browser window for the 'pipewave' software engineering project. The URL is 35.235.77.107/post/11. The page title is 'SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*'. The top navigation bar includes links for Home, About, MrProfessorPants, and Logout. A user profile picture for 'MrProfessorPants' is visible.

The main content area displays a student profile for 'jennifer'. Her name is listed at the top left, with a five-star rating icon to her right. Below her name is a text box containing the message: 'I eat burritos.' To the right of this text box is a large, stylized graphic of a mountain landscape.

A modal window titled 'Reviews' is open in the center. It contains a review from 'Mr ProfessorPants' dated 'Wed May 05 2021 19:22:56 GMT+0000 (Coordinated Universal Time)'. The review text is partially visible as 'Fun student who works hard...'. Below this, another review is partially visible with the text 'Student excelled at ...'. At the bottom of the modal, there is a five-star rating icon followed by 'N/A', and a blue 'Submit Review' button.

All users shall be able to customize their account settings. Student accounts can customize their demographics. Depending on the account type, this form includes different drop-down menus:

The screenshot shows a web browser window with the following details:

- Address Bar:** Not Secure | 35.235.77.107/user/jennifer/settings
- Title Bar:** pipeWave
- Page Header:** \*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*, Home, About, Jennifer, Logout
- Content Area:** A dark-themed modal dialog titled "Profile Settings" containing "User Info" fields. The fields include:
  - Username: NewUsername
  - Name: New Name
  - E-mail: newEmail@email.com
  - Ethnicity: --Select-- (dropdown menu)
  - Gender: --Select-- (dropdown menu)
  - Major: --Select-- (dropdown menu)
  - New Password: Enter Password
  - Confirm New Password: Confirm Password
- Buttons:** Save Settings (blue button at the bottom of the modal).

Doing a text based search will yield only those profiles with keywords associated with the search term, with the url reflecting those words:

The screenshot shows a web browser window with the URL [35.235.77.107/?search=The+Wolf](http://35.235.77.107/?search=The+Wolf). The page title is "pipeWave". The header includes a "Not Secure" warning, the IP address, and links for Home, About, NPOsAlly, and Logout. A red banner at the top states "\*\*\*SFSU Software Engineering Project CSC 648-848, Spring 2021. For Demonstration Only\*\*\*". Below the header is a search bar with the placeholder "search", a "GO" button, and an "Advanced" link. The main content area features a profile card for "The Wolf" with a yellow icon, the name "The Wolf", and the major "Communications". The background of the page is a stylized landscape with mountains, trees, and birds. At the bottom, there are two columns of text: one about the website's purpose and another listing its technical stack.

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### 3) Screen shots of key DB tables:

#### Users table:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ id	int	0	NO			select,insert,update,references	auto_increment
◆ username	varchar(64)	test@gmail.com	NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ name	varchar(128)	Robert Cacho	NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ email	varchar(128)	robert.cacho@gmail.com	NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ password	varchar(128)	password1	NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ usertype	int	0	NO			select,insert,update,references	
◆ active	int	1	NO			select,insert,update,references	
◆ created	datetime	2021-01-07 13:56:13	NO			select,insert,update,references	
◆ lastlogin	datetime	2021-04-17 22:32:44	YES			select,insert,update,references	
◆ title	varchar(128)	cool story bro, youre kinda ugly	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ bio	varchar(1096)	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ profilepic	varchar(128)	Assets/fb/funny.jpg	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ gender	varchar(128)	male	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ ethnicity	varchar(128)	Hispanic	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ major	varchar(45)	Computer Science	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ company	varchar(45)	Business	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ department	varchar(45)	Mathematics	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ resume	varchar(128)	Assets/fb/funny.jpg	YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

Count: 18

id	username	name	email	password	usertype	active	created	lastlogin	title	bio	profilepic	gender	ethnicity	major	company	department	resume
1	freshskates	Robert Cacho	robert.cacho@gmail.com	test123	0	0	2021-01-07 13:56:13	2021-04-17 22:32:44	cool story bro, youre kinda ugly	Assets/fb/funny.jpg	male	Hispanic	Computer Science	HULL	HULL	HULL	
2	coobearns	bobby	test@gmail.com	admin	1	1	2021-01-07 13:56:13	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Computer Science	HULL	HULL	HULL	
3	robert	Robert Cacho	robert@gmail.com	password1	0	1	2021-01-08 06:57	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	Hispanic	Computer Science	HULL	HULL	HULL	
4	robert	Robert Cacho	robert.cacho@gmail.com	password1	0	0	2021-01-08 06:57	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	Hispanic	Computer Science	HULL	HULL	HULL	
5	coobearns2	Jahr Hernandez	coobearns2@gmail.com	password1	0	0	2021-01-09 04:24:48	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	Hispanic	Engineering	HULL	HULL	HULL	
6	coobearns4	Anthony Nguyen	coobearns4@gmail.com	password1	0	0	2021-01-09 07:02:00	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	asian	Computer Science	HULL	HULL	HULL	
7	coobearns5	Richard Hendrick	coobearns5@gmail.com	password1	0	0	2021-01-09 16:26:42	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Mathematics	HULL	HULL	HULL	
8	coobearns6	John Hernandez	coobearns6@gmail.com	password1	0	0	2021-01-09 16:26:42	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Mathematics	HULL	HULL	HULL	
9	robertcachoo	Tonald Drung	robertcachoo@gmail.com	password1	0	0	2021-02-01 11:48:48	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Mathematics	HULL	HULL	HULL	
10	freshskates23	Robert Cacho	freshskates23@gmail.com	password1	0	0	2021-02-01 11:50:07	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Mathematics	HULL	HULL	HULL	
11	jennifer	Attack Helicopter	jinaldi32@yahoo.com	password1	0	0	2021-02-01 11:50:07	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	female	white	Business	HULL	HULL	HULL	
12	Cooper	Cooper	cooper1234567890@gmail.com	password1	0	0	2021-02-01 11:50:07	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Computer Science	Google	Communit...	asset...	
13	bobby7	Jeffrey Bezos	business.robertcacho123123	password1	0	0	2021-03-19 21:27	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/funny.jpg	male	white	Business	HULL	HULL	HULL	
14	EBlumpyDad	Engelbert Dempf	eblumpydad@outlook.com	password1	0	0	2021-03-19 22:10:33	2021-04-02 01:12:56	I love to sing and dance.	Assets/fb/bebe.jpg	male	white	Communications	HULL	HULL	HULL	
15	QueenKaren	Karen Karelovich	anotherkaren@hotmail.com	password1	0	0	2021-03-19 22:22:03	2021-04-02 01:12:56	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/karen.jpg	female	white	Communications	HULL	HULL	HULL	
16	lucy	lucy	lucy1234567890@gmail.com	password1	0	0	2021-03-19 22:30:09	2021-04-02 01:12:56	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/lucy.jpg	female	white	Communications	HULL	HULL	HULL	
17	SleepyJoe	Sleepy Joe Biden	sleepyjoe@whitehouse.gov	password1	0	0	2021-03-19 22:50:13	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/sleepy.jpg	male	white	Communications	HULL	HULL	HULL	
18	LCar2020	Lauren Rogers	irogen@mail.sfsu.edu	password1	0	0	2021-03-19 22:54:11	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/laura.jpg	female	latin	Engineering	HULL	HULL	HULL	
19	Rebs2020	Rebecca Mandred	rn2021@mail.sfsu.edu	password1	0	0	2021-03-19 22:54:11	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/rebs.png	female	white	Business	HULL	HULL	HULL	
20	zaynay2020	zaynay U	zaynay2020@gmail.com	password1	0	0	2021-03-19 22:54:11	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/zaynay.jpg	female	white	Business	HULL	HULL	HULL	
21	Adaaaaaaa	Ada Lovelace	Ada@mail.sfsu.edu	password1	0	0	2021-03-19 23:34:49	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/ada.jpg	female	white	Mathematics	HULL	HULL	HULL	
22	KevinDanh	Kevin Danh	kdanh@mail.sfsu.edu	password1	0	0	2021-04-01 19:02	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/kevin.jpg	male	asian	Computer Science	HULL	HULL	HULL	
23	Poopes1	Farmasi Yet	pyen@google.com	password1	0	0	2021-04-01 19:03	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/poopes104040d.jpg	male	white	Computer Science	HULL	HULL	HULL	
24	MrProfessor	Mr Professor	mrprofessor@mail.sfsu.edu	password1	0	0	2021-04-01 19:03	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor.jpg	male	white	Mathematics	HULL	HULL	HULL	
25	ERGMaster	erg	ergmaster@gmail.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/ergmast...	male	white	Mathematics	HULL	HULL	HULL	
26	MrProfessor1	Mr Professor1	mrprofessor1@hotmail.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor1...	male	white	Mathematics	HULL	HULL	HULL	
27	MrProfessor2	Mr Professor2	mrprofessor2@mailwin.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor2...	male	white	Mathematics	HULL	HULL	HULL	
28	MrProfessor3	Mr Professor3	mrprofessor3@mailwin.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor3...	male	white	Mathematics	HULL	HULL	HULL	
29	MrProfessor4	Mr Professor4	mrprofessor4@mailwin.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor4...	male	white	Mathematics	HULL	HULL	HULL	
30	MrProfessor5	Mr Professor5	mrprofessor5@mailwin.com	password1	0	0	2021-04-04 01:15:58	2021-04-17 22:32:44	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/mrprofessor5...	male	white	Mathematics	HULL	HULL	HULL	
31	Kittycat100	bobbo	jinaldi@mail.sfsu.edu	password1	0	0	2021-04-10 22:53:49	2021-04-16 19:48:41	As a kid I used to love reading books. I would spend hours in my room reading. I also enjoyed playing video games. I am currently a student at ASU.	Assets/fb/bobbo.png	male	white	Mathematics	HULL	HULL	HULL	
32	HomerSimp...	Homer Simpson	homer@simpsons.com	password1	0	0	2021-05-02 09:39:25	2021-05-02 09:39:03	All WORK AND NO PLAY M...	Assets/photos/1d84cd...	male	Hispanic	Nuclear Physics	HULL	HULL	asset...	
33	FreshStudent	Super Fresh	superfresh@mail.sfsu.edu	password1	0	0	2021-05-02 09:39:25	2021-05-02 09:39:03	Im a new student ready to sta...	Assets/photos/737962...	nonbinary	asian	Computer Science	HULL	HULL	HULL	
34	TeacherO'	Teacher O'	teachero@mail.sfsu.edu	password1	0	0	2021-05-03 07:28:59	2021-05-03 07:28:59	As a teacher, I have been teaching for 20 years.	Assets/photos/29459...	male	white	Computer...	HULL	HULL	HULL	
35	Student	New Student	student@mail.sfsu.edu	password1	0	0	2021-05-01 22:49:53	2021-05-01 22:49:53	I love to make children smile.	Assets/photos/0001564...	male	white	Mathematics	HULL	HULL	HULL	

## Alerts Table:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ id	int		NO			select,insert,update,references	auto_increment
◆ ethnicity	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ major	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ gender	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ fk_userid	int		YES			select,insert,update,references	

## Reviews Table:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ id	int		NO			select,insert,update,references	auto_increment
◆ comment	varchar(1096)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ fk_postid_c	int		NO			select,insert,update,references	
◆ fk_userid_c	int		NO			select,insert,update,references	
◆ created	datetime		NO			select,insert,update,references	
◆ review	int		YES			select,insert,update,references	

## 4) Google analytics plot for your WWW site:

Analytics | All accounts > PipewaveManager Pipewave ▾

Home

Realtime

LIFE CYCLE

Acquisition

Engagement

Monetization

Retention

USER

Demographics

Tech

EVENTS

Conversions

Events

EXPLORER

Analysis

CONFIGURE

Audiences

Custom definitions

DebugView

Try searching "Data Streams"

All Users Add comparison +

Users 0 New users 0 Average engagement time 0m 00s Total revenue \$0.00

USERS IN LAST 30 MINUTES 0 USERS PER MINUTE

TOP COUNTRIES

INITIATIVES

Your Insights will appear here soon.

In the meantime, you can create new custom insights to monitor your most important metrics. [Learn more](#)

Create

View realtime → View all insights →

WHERE DO YOUR NEW USERS COME FROM?

New users by User medium ▾

0 0.2 0.4 0.6 0.8 1

SESSION MEDIUM SESSIONS

No data available

Last 7 days ▾ View user acquisition → Last 7 days ▾ View traffic acq... →

WHAT ARE YOUR TOP CAMPAIGNS?

Sessions ▾ by Session medium ▾

SESSION MEDIUM SESSIONS

No data available

Last 7 days ▾

WHERE ARE YOUR USERS VISITING FROM?

Users ▾ by Country

COUNTRY USERS

No data available

World map

Last 60 days ▾ View countries →

Retention

User

Demographics

Tech

Events

Conversions

Explorations

Analysis

Configure

Audiences

Custom definitions

DebugView

HOW ARE ACTIVE USERS TRENDING?

User activity over time

30 DAYS 0

7 DAYS 0

1 DAY 0

27 Apr 28 29 30 01 May

Last 7 days ▾ View retention →

HOW WELL DO YOU RETAIN YOUR USERS?

User activity by cohort

Based on device data only

Week 0	Week 1	Week 2	Week 3	Week 4	Week 5
All Users	0.0%	0.0%	0.0%	0.0%	0.0%
Mar 21 - Mar 27					
Mar 28 - Apr 3					
Apr 4 - Apr 10					
Apr 11 - Apr 17					
Apr 18 - Apr 24					
Apr 25 - May 1					

6 weeks ending May 1

Last 7 days ▾ View pages and screens →

WHICH PAGES AND SCREENS GET THE MOST VIEWS?

Views by Page title and screen class

PAGE TITLE AND SCREEN CLASS VIEWS

No data available

WHAT ARE YOUR TOP EVENTS?

Event count by Event name

EVENT NAME	EVENT COUNT
No data available	

Last 7 days ▾ View events →

WHAT ARE YOUR TOP CONVERSIONS?

Conversions by Event name

EVENT NAME	CONVERSIONS
No data available	

Last 7 days ▾ View conversions →

WHAT ARE YOUR TOP SELLING PRODUCTS?

Ecommerce purchases by Item name

ITEM NAME	ECOMMERCE PUR...
No data available	

Last 7 days ▾ View items →

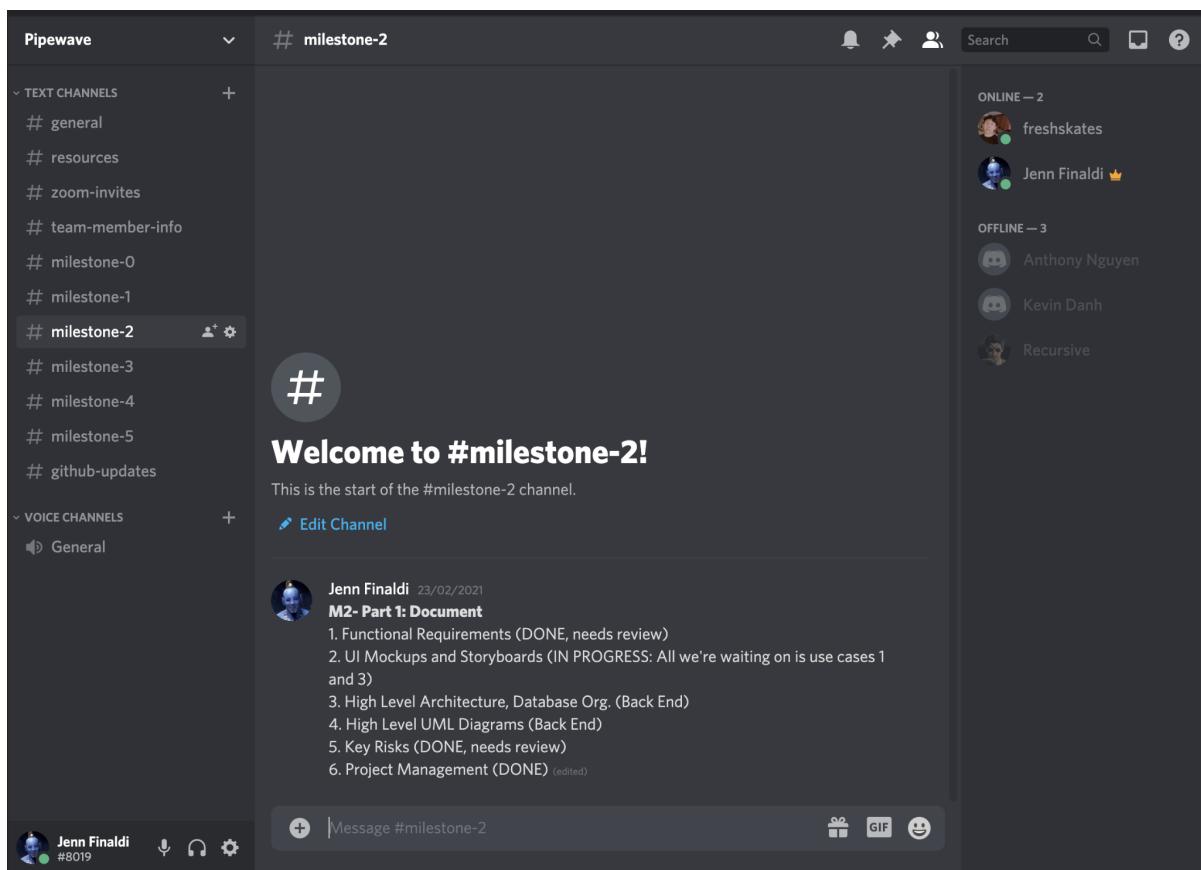
HOW DOES ACTIVITY ON YOUR PLATFORMS COMPARE?

Conversions ▾ by Platform

Last 28 days ▾ View tech details →

## 5) Screen shot(s) of your task management system (like Trello) showing a snapshot of your project management:

Our team uses a private Discord channel for our collaboration that also utilizes a webhook to update the team with new commits:



**Pipewave**

**TEXT CHANNELS**

- # general
- # resources**
- # zoom-invites
- # team-member-info
- # milestone-0
- # milestone-1
- # milestone-2
- # milestone-3
- # milestone-4
- # milestone-5
- # github-updates

**VOICE CHANNELS**

- General

**# resources**

Kevin Danh 09/02/2021

Milestone\_1.pdf [Download](#) 169.58 KB

1 **Executive Summary**: Short description of the final product/application and its key advantages, novelty, value (up to 1 page). Make it as an executive summary – think of answering the question of why we should fund this project – make it look like a business plan (not a marketing document). It's also good “marketing”. This summary should be readable to a general manager, not just a CTO or CIO. It should be brief enough to fit on one page and also to advertise/promote your project. Typical outline is: one paragraph on the motivation and importance of the application you are developing, followed by a paragraph on the main features and how they will benefit the user, how it works and how it helps the users (high level only, no jargon) and optionally what is unique about your product. You can also add a few sentences about something about your team (e.g. about your student startup team...).

2 **Personas and main Use Cases**: Summarize key personas (categories of users) for your application – their general characteristics, goals, pain points related to the application you are developing. About 1/3 of a page per persona – max 1 page. Note that personas are not requirements – they just help you say how personas will use your app (at high level). Then provide 4-5 use cases for each persona. Use cases are detailed requirements – they provide more detailed format for requirements. Focus only on main use cases. Some notes: **Focus on WHO** users do, **not** how they do it. **Focus on WHAT** users do, **not** how the application is used. **Focus on HOW** users do, **not** why they do it. **HOW** is the SW implemented. **NOTE:** avoid specific on HOW functions will be implemented. **Focus on WHAT** users do, **not** how the application is used. **Focus on HOW** the future product is **NOT** a description of how the product will actually work. **Focus on WHO** users do, **not** how they do it. **Focus on WHAT** users do, **not** how the application is used. **Focus on HOW** a descriptive title and number to each use case so it can be tracked.

3 **List of main Data items and entities**: Define main terms, types of users, data structures and “terms” or “entities” at high level (not implementation level) (e.g. name, meaning, usage, and NOT how the data is stored in memory). It is important to define them early. Note that this is not a list of key terms (main data elements/records used in your app, types of users and their terms)

4 **Initial list of functional requirements** – see class notes. This refers to high level requirements – what needs to be done, how it needs to be done at this point. Focus on WHAT and not HOW. Keep the user in mind. Develop these functional requirements in pairs with your team. Assign a number to each requirement – each requirement with unique numeric value and use these numbers consistently throughout the project. Note that there are about 5-10 functional requirements at this stage. At this stage **no need to prioritize** the requirements, collect all ideas from the team. We are looking for 20 or so requirements.

5 **List of non-functional requirements** (performance, expected load, security requirements, storage, availability, time tolerance, etc.). Note that non-functional requirements are often specific to high level requirement, so for M1 – M5 we request you simply copy them from high level documents. Non-functional requirements are very important as they define functional requirements in your design and development from now on – you are allowed to change them unless you get permission.

6 **Competitive analysis**: Find 3-4 competitive products. Present competitors’ features and benefits. Identify the strengths and weaknesses of your competitors vs. yours planned, only very high level. 5-6 entries max (as shown in the table below). Note that this is not a formal competitive analysis, but are the planned advantages or competitive relationship of your planned product to what is currently available. In the table clearly mark your product, e.g. shade its columns.

7 **High level system architecture and technologies used**: Briefly provide (mention by name) of all main SW components such as frameworks, APIs, tools and systems used in the system. Note that this is not a formal architectural diagram, but a list of what tools and systems were used. This list is to be the list of approved tools and systems that you may be using in your project during or after – but get it approved – **before** testing/picker API/tool and start using it. **Ask your instructors** and you have to justify it.

Jenn Finaldi #8019

Message #resources

**Pipewave**

**TEXT CHANNELS**

- # general
- # resources
- # zoom-invites
- # team-member-info
- # milestone-0
- # milestone-1
- # milestone-2
- # milestone-3
- # milestone-4
- # milestone-5
- # github-updates**

**VOICE CHANNELS**

- General

**# github-updates**

Lcsc648-02-sp21-Team04:master | new commit  
a5dce3 Fix broken code in Engine.js - jfinaldi

GitHub BOT 01/05/2021

jfinaldi [csc648-02-sp21-Team04:master] 1 new commit  
884e2c2 Add Custom Titles for all pages - jfinaldi

GitHub BOT 01/05/2021

KevinDanh [csc648-02-sp21-Team04:master] 1 new commit  
0b0af70 Changed Registration page major, department to... - KevinDanh

GitHub BOT 01/05/2021

jfinaldi [csc648-02-sp21-Team04:master] 1 new commit  
bd821f5 Fix small bugs - jfinaldi

GitHub BOT 01/05/2021

jfinaldi [csc648-02-sp21-Team04:master] 1 new commit  
aa43361 Better textbox formatting, user.hbs - jfinaldi

ONLINE — 2

- freshskates
- Jenn Finaldi

OFFLINE — 3

- Anthony Nguyen
- Kevin Danh
- Recursive

Jenn Finaldi #8019

Message #github-updates

Team PipeWave also used a Google Group to manage and collaborate on documents:

The screenshot shows the Google Groups interface for the 'PipeWave' group. The left sidebar includes links for 'New conversation', 'My groups', 'Recent groups', 'Favorite groups', 'Starred conversations', 'PipeWave' (selected), 'Conversations' (1), 'Approved' (1), 'Pending', 'People' (selected), 'Members', 'Pending members', 'Banned users', 'About', 'My membership settings', and 'Group settings'. The main area displays a list of conversations with Jennifer Finaldi as the author. The list includes:

Author	Subject	Date	Starred
Jennifer Finaldi	M5 648 Document - Invitation to edit - jfinaldi32@gmail.com has...	May 3	☆
Jennifer Finaldi	M3 Improvements (Code) - Invitation to edit - jfinaldi32@gmail.c...	Apr 17	☆
Jennifer Finaldi	M4 648 Document - Invitation to edit - jfinaldi32@gmail.com has...	Apr 13	☆
Jennifer Finaldi	M1 Todo - Invitation to edit - jfinaldi32@gmail.com has invited y...	Apr 1	☆
Jennifer Finaldi	Storyboards - Invitation to edit - jfinaldi32@gmail.com has invite...	Feb 27	☆
Jennifer Finaldi	CSC648-M2 Document - Invitation to edit - jfinaldi32@gmail.com...	Feb 23	☆
Jennifer Finaldi	Week 4 Recap - Invitation to edit - jfinaldi32@gmail.com has invi...	Feb 19	☆
Jennifer Finaldi	Week 4 Breakdown - Invitation to edit - jfinaldi32@gmail.com ha...	Feb 18	☆
Jennifer Finaldi	CSC648- M1 Document - Invitation to edit - jfinaldi32@gmail.co...	Feb 17	☆

The screenshot shows the Google Groups interface for the 'PipeWave' group. The left sidebar includes links for 'New conversation', 'My groups', 'Recent groups', 'Favorite groups', 'Starred conversations', 'PipeWave' (selected), 'Conversations' (1), 'Approved' (1), 'Pending', 'People' (selected), 'Members' (selected), 'Pending members', 'Banned users', 'About', 'My membership settings', and 'Group settings'. The main area displays a list of group members with their roles and posting permissions. The list includes:

Profile	Member	Role	Join Date	Subscription	Posting
	Jennifer Finaldi jfinaldi32@gmail.c...	Owner	Feb 17, 2021	Each email	Allowed
	anthonynguyen7378 anthonynguyen737...	Member	Feb 17, 2021	Each email	Allowed
	jahirhere117 jahirhere117@gmai...	Member	Feb 17, 2021	Each email	Allowed
	kevindanh21 kevindanh21@gma...	Member	Feb 17, 2021	Each email	Allowed
	robertc9911 robertc9911@gmai...	Member	Feb 17, 2021	Each email	Allowed

## **6) Post analysis – lessons learned:**

### **Main Challenges:**

There were knowledge and skills issues that this team ran into, especially when it came to being able to work autonomously without guidance from front or back end managers.

Lack of self-drive seemed to be apparent in some of the team members, who required more check-ins with the team lead in order for the project to remain on track for certain deadlines. Despite this, there were tasks that the team lead had assigned that remained unfulfilled by its respective milestone deadline for one or more of the milestones.

The team lead had difficulty with assertion when it came to task assignment and enforcement of roles. She also had difficulty with task management, as the Discord channel was not always updated with the current list of tasks and who they were assigned to. Communication was a bit too informal from the team lead, mainly being through Discord chat.

The biggest challenge, however, was collaboration and the lack of code contribution of all team members. Because of the lack of enforcement of pre-agreed-to roles by the team lead, only three of the team members ended up contributing all of the project code not related to the M0 "about me" pages. This left the back-end contributor overwhelmed, with it being almost impossible for one person to manage the entire back-end alone without sacrificing performance in other classes. This left a problem for the front-end team, who did not have enough working knowledge to be able to integrate the front-end code without guidance from someone who knew the back-end. As such, the front-end team took responsibility to help out the back-end by learning more about the back-end code on their own, adding model functions, routes, and database adjustments whenever necessary. This new adaption of the front-end team slowed down the progress of the project to the point where not all of the P1 requirements could be fulfilled, and some of the application features were not able to have been properly tested and debugged.

### **Addressing these Challenges:**

The team lead could have been more assertive in mandating all-hands meetings regularly, instead of communicating them as optional. Using a proper task managing system like Trello could have also assisted with the organization of tasks.

Communication by email would have also assisted in creating a more formal correspondence. Regular one-on-one checkins with the team lead would have helped get a better understanding of what each individual requires in order to succeed with the project, including code review and evangelism whenever necessary. Establishing more solid task deadlines instead of multi-day window deadlines can also help motivate the team to complete tasks early to ensure there is time for review and improvement before submission.