

# **Final Project for SW Engineering**

## **CSC648/848 Spring 2021**

**648-02 | Team 02 | ProSpector**

Cameron Cirini (Team Lead) [ccirini@mail.sfsu.edu](mailto:ccirini@mail.sfsu.edu),  
Franklin Arevalo (Frontend Lead), Faisa Jama (GitHub Master),  
Tony Cao (Backend Lead), Zhuojun He (Backend Support)

## **“Milestone 5”**

<https://prospectorsf.page/>

05/11/21

## Product Summary

Name of the product: ProSpector

List of committed functions:

ReqID	Function
F1	All Users shall be able to sign in.
F2	All Users shall be able to sign up.
F3	Students shall be able to update their profile information.
F4	Students shall receive alerts to get ready for interviews.
F5	Professors shall have the ability to rate students on a scale from 1-5.
F6	Professors shall have the ability to enter recommendations for Students.
F7	Recruiters shall have the ability to register to the portal.
F8	Recruiters shall have the ability to filter candidates with advanced search.
F9	Recruiters shall have the ability to view and download resumes.
F10	Recruiters shall receive alerts for all profiles that match saved searches
F11	All Users shall have the ability to delete their profile.
F12	Advanced search shall be done on major and demographic information.

What is unique about your product?

Prospector is unique in that it allows recruiters to sift through a pool of candidates easily by providing them access to the demographic information they want and need. The hiring process can be tedious for both parties, so our platform aims to limit rejection, as well as the time to fill positions, by streamlining the recruiting process. Recruiters on our platform are given the tools they need to stay up to date on new candidates that meet their hiring needs.

URL to your product: <https://prospectorsf.page/>

## Screenshots of Final Product

SFSU Software Engineering Project CSC 648-848, Spring 2021

# ProSpector

Home Student Professor Recruiter About Us Login Sign Up

### Get Matched with Your Ideal Candidate!

ProSpector serves as the central hub for all SFSU students employment in the Tech industry. Create a profile and let our algorithm match you with an ideal candidate! ProSpector narrows down the time of looking for employers while giving exposure to those who don't.

Start Applying Start Hiring



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# ProSpector

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### Our Amazing Team



Cameron  
Team Lead



Faisa  
Github Master



Franklin  
Frontend Lead



Tony  
Backend Lead



George  
Backend Support

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# ProSpector

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## Sign In

Email

Password

[Login](#)

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# ProSpector

Home Student Professor Recruiter About Us [Login](#) [Sign Up](#)

### Select Type of Account

[Student](#)

[Recruiter](#)

[Instructor](#)

## Sign Up As Student

First name	Last name
Student Id	Major
Email	
Password	Confirmation Password

### Equal Employment Opportunity (EEO)

This section is intended to help companies comply with federal law and strengthen diversity recruiting efforts. Please select 'prefer not to say' in the (dropdown menu) if you do not wish to answer these questions.

Gender	LGBTQ
--	--

Ethnicity (select best fit)	Veteran
--	--

Disability	Received Financial Aid?
--	--

Are you a first generation college student?

--	--
----	----

No file chosen

## Sign Up As A Recruiter

Company	
Website Link	
Description	
Email	
Password	Confirmation Password

[Submit form](#)

## Sign Up As An Instructor

First name	Last name
University	
Email	
Password	Confirmation Password

[Submit form](#)

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# ProSpector

Home About Us Matches Account Sign Out

## Search

Select Option | Search... Get Notified Search

**Syble Hamill - 3 / 5**

Major - accounting Gender - female Ethnicity - White

Download Resume

**Dawson Macejkovic - 0 / 5**

Major - political science Gender - male Ethnicity - Native Hawaiian

Download Resume

**Heather Ledner - 0 / 5**

Major - biology Gender - male Ethnicity - White

Download Resume

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# ProSpector

Home About Us Account Sign Out

## Recommend Students!

912345670 Search View Recommendations

**Syble Hamill**

Major - accounting

Recommend Download Resume

# ProSpector

[Home](#) [About Us](#) [Matches](#) [Account](#) [Sign Out](#)

## Matches

You are matched with

**Student Name**

[Not Interested](#) [Connect](#)

You are matched with

**Student Name**

[Not Interested](#) [Connect](#)

You are matched with

**Student Name**

[Not Interested](#) [Connect](#)

## Saved Searches

Major: Null  
Gender: Null  
Ethnicity: Null

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# ProSpector

[Home](#) [About Us](#) [Account](#) [Sign Out](#)

## Matches

**Example Company Name**

Role Position Title - Location [Not Interested](#) [Connect](#)

**Example Company Name**

Role Position Title - Location [Not Interested](#) [Connect](#)

**Example Company Name**

Role Position Title - Location [Not Interested](#) [Connect](#)

# ProSpector

[Home](#) [About Us](#) [Account](#) [Sign Out](#)

## Student Recommendation

Student Name: Syble Hamill

Student ID: 912345670

[Student Recommendation / Letter of Recommendation](#)

Student Overall Rating: 0



[Submit](#)

# ProSpector

[Home](#) [About Us](#) [Account](#) [Sign Out](#)

## Recommendations

[Search Students](#)

Student Name: John Doe

Student ID: 123456789

Major: Null

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries.

Student Overall Rating: 5

[Edit](#)

Student Name: Jane Doe

Student ID: 987654321

Major: Null

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries.

Student Overall Rating: 2

[Edit](#)

Student Name: Richard Roe

Student ID: 012345678

Major: Null

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries.

Student Overall Rating: 4

[Edit](#)

# ProSpector

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## Instructor Account

Name: John Doe

University Role: Professor

University Name: Example University

Location: city

Email: johndoe@example.edu

Password: ██████████

[Edit](#)

[Delete](#)

[View Recommedations](#)

# ProSpector

[Home](#) [Student](#) [Professor](#) [Recruiter](#) [About Us](#) [Login](#) [Sign Up](#)

Are You Sure?

[Yes](#) [No](#)

## Screenshots of key DB tables

Student table and professor table.

```
mysql> select userId, email, studentSFSUID, firstName, lastName, major, gender, ethnicity from student;
+-----+-----+-----+-----+-----+-----+-----+
| userId | email | studentSFSUID | firstName | lastName | major | gender | ethnicity |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | bill73@example.com | 912345670 | Syble | Hamill | accouting | female | White
| 2 | hshield@example.com | 912345671 | Dawson | Macejkovic | political science | male | Native Hawaiian
| 3 | agenes.ellsworth@example.com | 912345672 | Heather | Ledner | biology | male | White
| 4 | mccullough.audra@example.com | 912345673 | Roslyn | McGlynn | political science | female | American Indian
| 5 | greyson.dach@example.com | 912345674 | Monica | Conroy | physics | female | Asian or Asian American
| 6 | queenie.klein@example.com | 912345675 | Aubree | Altenwerth | computer science | male | Hispanic or Latino
| 7 | hamill.emery@example.org | 912345676 | Zakary | Mertz | chemistry | male | White
| 8 | kathlyn80@example.org | 912345677 | Noe | Luetten | chemistry | male | White
| 9 | watsica.savannah@example.net | 912345678 | Vergie | Grant | physics | female | Asian or Asian American
| 10 | jhessel@example.com | 996329846 | Thad | Cormier | biology | male | Hispanic or Latino
+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from professor;
+-----+-----+-----+-----+-----+-----+-----+
| userId | email | password | firstName | lastName | university |
+-----+-----+-----+-----+-----+-----+
| 1 | emile34@example.net | $2b$10$St6IPCh1..gkI.tvN.D5Wb0f7rdQKmHuufL98...V0Dj6KT2NQKzbG | Tess | Boyer | San Francisco State University
| 2 | holli78@example.com | $2b$10$eYahqTrBka59RJJP1ljo/HivGznhWR6i6WlJaoI8jPQW81sbni | Osbaldo | Reilly | San Francisco State University
| 3 | auer.luis@example.net | $2b$10$80e3ttcTzcJdpaeKNAtueR0Kb0jZfWBaxIAh5s8cbwM9T/rw35o | Jadon | Enard | San Francisco State University
| 4 | elliot60@example.org | $2b$10$os2Yh6Uv4d62vhffZOK.8cHGdjMpTr/41xVBrp8ck7CR58MPwo | Jaeden | Pollich | San Francisco State University
| 5 | rowland.bruen@example.net | $2b$10$Hlwma2925Nc0Rcnf9wppe76G/2oLH17ZCk2.aHw08Kt3j7KZ | Emmitt | Koeppl | San Francisco State University
| 6 | tbauch@example.net | $2b$10$EtfbIp4qsiastIwJ09lre7eUF/4nbFhU3zhZd.1mXMdq7Krkq | Celestine | Reilly | San Francisco State University
| 7 | cicero.brown@example.com | $2b$10$Pn0utghA4KApHfzsdcZT.mmcqlv5rnrNxFysu1D97YpHyhzb2 | Jarred | Goldner | San Francisco State University
| 8 | wiza.kirstin@example.org | $2b$10$H2st0DmBybrkrhbyetCeFDv90A/eyatNmCpaHkxyugoogKcNN06 | Jewell | Wunsch | San Francisco State University
| 9 | geoffrey.von@example.net | $2b$10$vsfbRdxq1TlQ23R.DBsfbuB0.XMFDrdtIveqndwQ92ZFS61f.Wa | Arlane | Streich | San Francisco State University
| 10 | uhrirth@example.net | $2b$10$6Hljqb1Gm58Balsh09lLuWk.TOMtxxV2vbT9a4Fv5satIshavG. | Jude | Pacocha | San Francisco State University
| 11 | naruto@example.com | $2b$10$H3r/H41Yp63vycykecf800TGLOB3.Rs.lhehts8pd9dHb7inpBXG | Naruto | Uzunaki | San Jose State University
| 12 | sasuke@example.com | $2b$10$tr.LP4Iub7F4lrJzHwu.t6mCoyqe40Uxbgikm4TkxZPuAw1XW | Sasuke | Uchiha | Leaf Academy University
+-----+-----+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql>
```

Recruiter table & Recommendation table.

```
mysql> select userId, email, companyName, websiteLink from recruiter;
+-----+-----+-----+-----+
| userId | email | companyName | websiteLink |
+-----+-----+-----+-----+
| 1 | breinger@example.net | Haag-Hand | http://pouros.com/
| 2 | vcorkery@example.net | Ohara Ltd | http://Haraltd.com/
| 3 | waldo04@example.org | waldo64 | http://waldo64.com/
| 4 | logan.parker@example.net | loganparker | http://Loganparker.net/
| 5 | zetta.corwin@example.net | Zettaco | http://ZettaCo.com/
| 6 | oprohaska@example.net | oprohaska | http://oprohaska.com/
| 7 | bart.torp@example.org | barttorp | http://barttorp.com/
| 8 | jonatan80@example.net | jonatan | http://jonatan.com/
| 9 | colby.frami@example.net | colby | http://colby.com/
| 10 | oxframi@example.net | Oxframi | http://oxframi.com/
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from recommendation;
+-----+-----+-----+-----+-----+
| recommendationId | studentSFSUID | professorId | rating | recommendationText |
+-----+-----+-----+-----+-----+
| 1 | 912345673 | 1 | 3 | Nemo odit eligendi error tempore accusantium ut.
| 2 | 912345673 | 8 | 3 | Rerum sed quis illo similique.
| 3 | 912345670 | 1 | 4 | Ipsam est asperiores at perferendis dolores veniam adipisci.
| 4 | 912345677 | 3 | 3 | Ut aperiam sint perferendis nostrum porro.
| 5 | 912345674 | 3 | 2 | Similique quae incidunt reprehenderit quidem recusandae.
| 6 | 97564941 | 4 | 3 | Voluptatum ipsam fugit expedita.
| 7 | 912345671 | 5 | 4 | Et recusandae hic at.
| 8 | 905052664 | 5 | 5 | Odio possimus quos suscipit id cupiditate.
| 9 | 905016737 | 6 | 3 | Dicta ex libero perspiciat is non.
| 10 | 912345676 | 1 | 1 | Et voluptatem libero ea.
| 11 | 912345670 | 5 | 5 |
| 12 | 912345670 | 5 | NULL | bbbjnkkmlkmlklmlkmlknkjnk
| 13 | 912345670 | 5 | NULL |
| 14 | 912345670 | 5 | NULL | mkmklmklmklmlkmlk
| 15 | 912345670 | 5 | 5 |
| 16 | 912345670 | 5 | 5 |
| 17 | 912345670 | 5 | 5 |
| 18 | 912345670 | 5 | 5 |
| 19 | 912345670 | 5 | 5 | kmdf kefemfmek
| 20 | 912345670 | 5 | 5 | kmdf kefemfmek
| 21 | 912345670 | 5 | 5 | kmdf kefemfmek
| 22 | 912345670 | 5 | NULL |
+-----+-----+-----+-----+
22 rows in set (0.00 sec)

mysql>
```

Image table, which is used to save the image thumbnail of each resume.

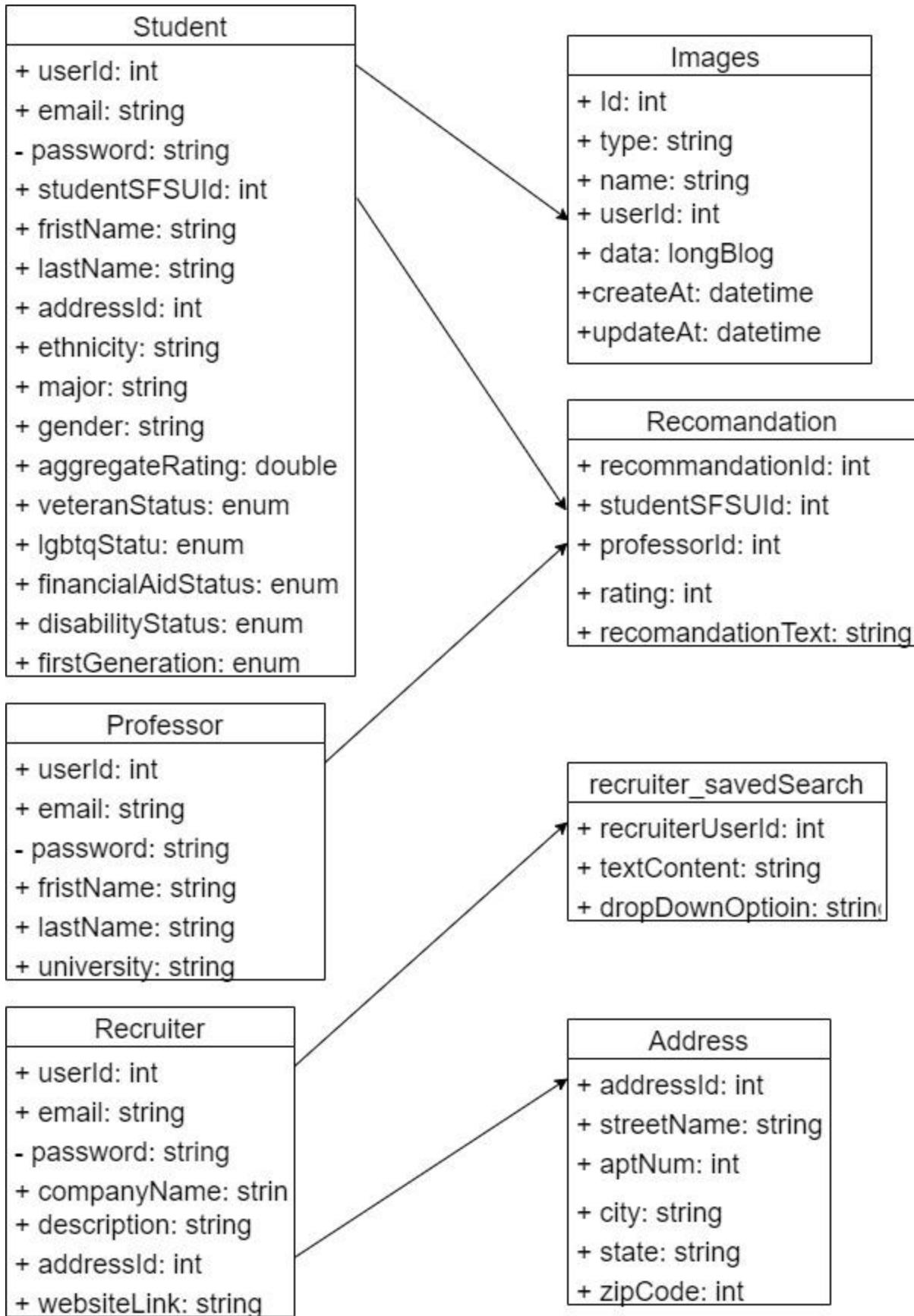
```
+  
10 rows in set (0.01 sec)  
  
mysql> describe images;  
describe images;  
^C  
mysql> describe image;  
ERROR 1146 (42S02): Table 'csc648Team2.image' doesn't exist  
mysql> show tables;  
+-----+  
| Tables_in_csc648Team2 |  
+-----+  
| address           |  
| images            |  
| professor         |  
| recommendation    |  
| recruiter         |  
| recruiter_savedSearch |  
| student           |  
+-----+  
7 rows in set (0.00 sec)  
  
mysql> describe images;  
+-----+-----+-----+-----+-----+  
| Field      | Type       | Null | Key | Default | Extra          |  
+-----+-----+-----+-----+-----+  
| id         | int        | NO   | PRI | NULL    | auto_increment |  
| type       | varchar(255) | NO   |     | NULL    |                |  
| name       | varchar(255) | NO   |     | NULL    |                |  
| userId     | int        | NO   |     | NULL    |                |  
| data       | longblob   | NO   |     | NULL    |                |  
| createdAt  | datetime   | YES  |     | NULL    |                |  
| updatedAt  | datetime   | YES  |     | NULL    |                |  
+-----+-----+-----+-----+-----+  
7 rows in set (0.00 sec)  
  
mysql> █
```

## Address table & recruiter\_savedSearch table

```
mysql> select * from address;
+-----+-----+-----+-----+-----+-----+
| addressId | street | aptNum | city | state | zipCode |
+-----+-----+-----+-----+-----+-----+
| 1 | 1242 Elena Landing | 19 | North Laviniahaven | Illinois | 48353 |
| 2 | 1160 Bo Radial Suite 964 | 44 | New Maybell | Indiana | 61057 |
| 3 | 436 Guido Dam | 86 | West Rocioburgh | NewYork | 63378 |
| 4 | 0869 Elvie Ferry | 13 | West Bruceville | Delaware | 87159 |
| 5 | 741 Dewayne Oval Apt. 904 | 45 | New Fabiola | NorthDakota | 57798 |
| 6 | 644 Hartmann Common | 5 | West Grant | Maine | 39253 |
| 7 | 6085 Cicero Mountains Apt. 499 | 72 | New Missourihaven | Alaska | 39954 |
| 8 | 164 Olga Park | 61 | Corwinbury | Maryland | 85076 |
| 9 | 86634 Mosciski Walk Suite 493 | 4 | Lake Gail | Arizona | 16583 |
| 10 | 36656 Cremin Court | 26 | Crystaltown | SouthDakota | 2372 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from recruiter_savedSearch;
+-----+-----+-----+
| recruiterUserId | textContent | dropDownOption |
+-----+-----+-----+
| 1 | biology | major |
| 1 | physics | major |
| 1 | computer | major |
| 1 | female | gender |
| 2 | yes | lgbtqStatus |
| 2 | yes | financialAidStatus |
| 3 | no | firstGeneration |
| 4 | do not specify | disabilityStatus |
| 5 | accouting | major |
| 5 | male | gender |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> █
```



# Google Analytics Plot

We're excited to announce the new Google Analytics, designed to give you the essential insights you need to be ready for what's next. You can access the new Google Analytics experience by setting up a Google Analytics 4 property, formerly known as "App + Web" property.

[Dismiss](#) [Learn more](#)

**Analytics** All accounts > Prospector All Web Site Data ▾ Try searching for "acquisition overview"

[Home](#) Google Analytics Home [INSIGHTS](#)

REPORTS

- Customization
- Realtime
- Audience
- Acquisition
- Behavior
- Conversions

Users Sessions Bounce Rate Session Duration

4	6	33.33%	15m 33s
---	---	--------	---------

12AM

Today ▾ AUDIENCE OVERVIEW >

Active Users right now

1

Page views per minute

Top Active Pages / Active Users 1

REAL-TIME REPORT >

Attribution BETA

Discover

Admin

Ask Analytics Intelligence

TECHNICAL PERFORMANCE  
Worst country by page load time for countries with at least 10 users last month

MEASURE YOUR GOALS  
What's my goal conversion rate?

UNDERSTANDING USER BEHAVIOR  
Session duration for new vs. returning users last month

MORE INSIGHTS >

How do you acquire users?

# Screenshots of Task Management System

The screenshot shows the Asana interface for a project named "M0". The left sidebar includes links for Home, My Tasks, Inbox, Portfolios, Goals, Favorites, Reports, and a team section for "CSC 648 Team 02". The main area displays a board view with three columns: "To do", "In progress", and "Complete".

- To do:** Contains one task: "Troubleshoot slow Ubuntu test environments (most likely a resource allocation issue)".
- In progress:** Contains two tasks:
  - "Optional: Route Parameters & JSON"
  - "Design Website Mock-up" (with a yellow "PA" status indicator)
- Complete:** Contains three tasks:
  - "Software Stack & Testing Environment"
  - "Deploy on AWS" (with a blue "PA" status indicator)
  - "M0: About Me Pages" (with a blue "PA" status indicator)

Each task card includes a "View all subtasks" link and a "+ Add task" button.

M1

Overview List **Board** Timeline

3 tasks completed today

**Complete**

- Format and Edit Draft  
Feb 23
- Brainstorm  
Feb 17
- Executive Summary
- Personas & Use Cases
- List of Main Data Items & Entities
- Functional Reqs
- Non-Functional Reqs
- Competitive Analysis
- High-level System Arch & Tech Use
- Team and Roles
- Checklist

+ Add subtask

Begin Backend Dev

Optional: Route Parameters & JSON

Generic about-me

Add individual about-me data to JSON

Access JSON data based on route info

+ Add subtask

Troubleshoot slow Ubuntu test environments (most likely a resource allocation issue)

+ Add task

M2

Overview List **Board** Timeline

Last task completed yesterday

**Complete**

- freeze m1
- More Detailed Document  
Mar 9
- Functional Requirements - Prioritized
- UI Mockups and Storyboards (high priority)
- High Level Architecture, DB Organization
- High Level UML Diagrams
- ID actual key risks for your project
- Project Management

+ Add subtask

Vertical Prototype  
Mar 16

- NodeJS APIs
- New Search Page
- Display DB (After APIs are created)
- Set Up NodeJS ports

+ Add subtask

+ Add task

**M3** Set status

Overview List **Board** Timeline

2 tasks completed today

**Complete** + ...

- P2 UI/UX 1 ↗▶
- UI & DB Congruency 2 ↗▶
  - UI FA
  - DB ZH
- + Add subtask
- P1 UI/UX Apr 6 4 ↗▶
  - Student
  - Professor EJ
  - Recruiter
  - DISPLAY "SFSU Software Engineering"
- + Add subtask
- Critical Routes Apr 6 3 ↗▶
  - Search
  - Resumes (BLOBS must be working)
  - "Image & Image Thumbnail" (Wait)
- + Add subtask
- Front End Bug Fix 1 ↗▶
- Clean Up Github & Server 3 ↗▶

+ Add task

**M4** Set status

Overview List **Board** Timeline

Last task completed on Apr 20

**Complete** + ...

- Product Summary cc
- Usability Test Plan ZH Apr 20 3 ↗▶
- QA Test Plan ZH Apr 20 4 ↗▶
- Code Review FA Apr 20 5 ↗▶
- Security Self Check Apr 20 4 ↗▶
- Check Non-Functional Specs cc Apr 20

+ Add task



M5 ▾ ⓘ ⚡ Set status

Overview

List

Board

Timeline

Calendar

Dashboard

More...



Share

Search



1 task completed today

All tasks

Filter

Sort



To do

+ ...

In progress

+ ...

Complete

+ ...

 Demo

+ Add task

 Routes

4 ↴

 Delete Profile Update Student Sign-In Student Signup (Needs to be FA)

+ Add subtask

 Tests/ Polish

5 ↴

 All UI is scalable Spelling All signup, login functioning Check all search parameters for ex All alerts functioning

+ Add subtask

 Compile M5 Documentation

+ Add task

 Alerts Update DB with alternate reumse's Admin

2 ↴

View all subtasks

+ Add task

## Team Member Contributions

CC

Cameron Matthew Cirini

Mon 5/10/2021 8:24 PM

To: Faisa Jama; Jose Franklin Arevalo Ruiz; Tony Trung Cao; Zhuojun He

Addendum After Github Merge:

Cameron Cirini - Team Lead

GitHub Commits: 37

### Project Contribution

- Server setup, ownership, operation, and maintenance
  - Including:
    - HTML certification, NGINX configuration, SSH Key distribution
    - MySQL account and credentials creation
    - Ubuntu image creation and distribution for local development
    - General troubleshooting for frontend and backend launch, dependencies, and communication
- Google Analytics ownership and integration
- Domain registration and ownership
- Initial project setup, React and Node.js integration
- Milestone Instructions M0-M5 breakdown with team
- Facilitation of weekly meeting discussion
  - Requirement discussion
  - Task progress check-ins
  - Troubleshooting
- Asana task creation & delegation
- Milestone Documents M0-M5
  - Content, formatting, and task delegation
  - Final approval and editing before Submission
  - Document submission email and GitHub inclusion
- Testing and Error Logging (various pages & routes)
  - (Function and Container Errors) Pages: AboutMe, App, Navbar and others
  - (Errors/ unexpected return results in ) Routes: Login, Sign-in, Search, ResumeUpload, and others
- Ensured all features met both functional and non-functional requirements
- Frontend Specific
  - Minor bug fixes, formatting, and troubleshooting (various pages)
  - Discussed and guided page design and product flow
- Backend Specific
  - Bug fixes pertaining to the Recruiter Search route results
  - Discussed and guided DB structure

...

FJ

Faisa Jama

Mon 5/10/2021 9:01 PM

To: Cameron Matthew Cirini

Cc: Jose Franklin Arevalo Ruiz; Tony Trung Cao; Zhuojun He

Good Evening Team 2,

Faisa Jama - GitHub Master

**Project Contribution:**

Being the GitHub Master, I was in charge of:

- creating new branches
- merging branches into the master or develop branch
- cleaning up the repository
- updating README.md
- deleting unnecessary files
- answering questions about pulls, pushing, and commits

I was in charge of designing the app, which involves:

- designing the UI Mockups and Storyboards
- implementing the design to our app
- designing the mobile view for each page

As for the documenting, I did the following:

- created a list of functional requirements
- created the competitive analysis
- revised the use cases
- added data terms and names to the screenshots of the UI Mockup

**GitHub Commits** - 46

Sincerely,

Faisa Jama

SFSU ID: 917761655

J

Jose Franklin Arevalo Ruiz

Tue 5/11/2021 12:48 AM

To: Zhuojun He; Cameron Matthew Cirini  
Cc: Tony Trung Cao; Faisa Jama

Hi Everyone!

Franklin Arevalo - Frontend Lead  
Github Commits: 18

Project Contribution

- Figma Design Outline
  - design outline template in Figma which was referenced throughout the project
- Frontend Axios routes functionality
  - Implement Search functionality using routes created in the backend
  - Structured Login / Logout pages as well as their functionality
  - Worked on Signup pages with the help of team members to be able to properly create new users
  - Resume Upload
- Organization
  - Created page structure and style was added later
  - Organized pages into folders for better structure
  - Created components for repetitive use
  - Chose coding design style
  - Worked on the code review alongside team members
- Debugged
  - Debugged team pages

Best,  
Franklin

ZH

Zhuojun He

Mon 5/10/2021 8:00 PM

To: Cameron Matthew Cirini



Hello, everyone

To be honest, I didn't make a lot of commitment to the GitHub except the milestone 1 some supplemental recourse for the about me page. The number of commitments is about 3. I spent most of my time on managing the database in our server and also some documentation stuff. First of all, during the course and project, I learnt how to code in the NodeJS and express online and also from my other team members' code. I am taking control of the backend database by using MySQL. So I learnt MySQL myself, searching and writing sql commands to create corresponding tables by following the requirements in milestone 2. I also respond to inserting dummy data into the tables to enrich the content of the database. In addition, I manage the update of the tables in our database, and also the attributes, content of the tables. Last but not least, I spend time on designing and writing propose for the usability and QA test for checking our search page and also the other document stuff during the project period.

 TC

Tony Trung Cao

Tue 5/11/2021 3:06 PM

To: Cameron Matthew Cirini

Tony Cao – Backend lead

#### GitHub Commits – 41

##### Project Contribution:

- In charge of building the back end
- Set up back end server
- Built routes to connect frontend with backend
- Connected backend to database
- Designing the database
- Ensuring backend security
- File uploading and storage
- Designed layer architecture for backend
- Debugging frontend and backend code

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## Post Analysis

Over the course of developing Prospector, our team faced various challenges that could have been addressed differently and more optimally. In many cases these challenges lead to lost time and extra work. In an attempt to grow as a team, these challenges will be addressed here and possible solutions will be given.

**Problem:** The free server architecture (AWS EC2) used was insufficient when it came to building and deploying our application. Server crashes with 10min restart periods were a common occurrence.

**Solution(s):**

- 1) Pay for a server with more CPU power on AWS or another service.
- 2) Run two different servers, one with React and one with Node.js to lighten the load.
- 3) Limit per-process CPU using cpulimit or other similar tools.

**Problem:** Remote work with new technologies was difficult for some of our team. Issues that could have been resolved faster in person and would have been good collaborative learning experience became long frustrating tasks.

**Solution(s):** Implement a pair programming routine remotely using Live Share in VSCode, this practice could have been used to save time and create a more effective collaborative environment.

**Problem:** Broken front end connections to stable back end routes at later stages.

**Solution(s):** Implement more rigorous testing of front end functionality during development. Specifically ensure that all data from the server is being accessed as intended in the final product, limit the use of local DB and host a dedicated and open API server to test front end integration off of the production server.

In addition to these technical challenges, some communication problems did occur during development. These issues included lack of clarity between Backend and Frontend expectations leading to changes being made at all levels, DB, Backend, and Frontend if a change was made. These issues were predominantly caused by a lack of communication during the planning stages. A resolution to this challenge would be longer sessions relating to the way that the front end should expect to interface with each route, the specific data to be displayed to the user, and the security protocols in place. Planning these from the beginning would have allowed for smoother development. Frameworks for unfinished features could have been added earlier with documentation on expected use so that all developers could work on implementing features