**SW Engineering  
CSC 648/848  
Milestone 1  
Section 04 Team 02**

**September 27th, 2023**

**The Team:**

Team Lead - Satvik

Github Master - Matthew

Front-End Lead - Aaron

Back-End Lead - Sungmu

Front-End Lead - Ben

Scrum Master - Pearl

**Revision Table**

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**Content and structure for Milestone 1 document for review**

**Project Name: Beehive - Connecting SFSU Campus**

**Executive Summary:**

In today's rapidly evolving world of higher education, fostering seamless communication and community-building among students is imperative. We proudly present Beehive, an exclusive social media application meticulously designed for the vibrant student population at San Francisco State University (SFSU). Beehive is not just another social app; it represents a multifaceted platform aimed at enriching the social and professional lives of the SFSU campus community.

**Motivation and Importance:**

SFSU embodies a diverse tapestry of talents and ideas, yet the challenge of nurturing connections within this dynamic community persists. Beehive is driven by the vision of fortifying bonds among students, fostering opportunities, and simplifying the intricacies of campus life. With Beehive, our aim is to enhance the SFSU student experience, rendering it more engaging, productive, and enjoyable.

**Product Description:**

Beehive is a comprehensive social media application, meticulously tailored for the unique needs of SFSU students. It serves a dual purpose, facilitating personal connections and streamlining on-campus employment prospects.

1. Social Connectivity: Beehive provides an intuitively designed, campus-centric social platform where students can forge connections, share experiences, and cultivate enduring friendships. Whether it involves forming study groups, orchestrating events, or merely exchanging campus anecdotes, Beehive becomes the virtual hive buzzing with student activity.

2. On-Campus Employment: Beehive transcends the boundaries of conventional social apps by seamlessly integrating on-campus job listings and opportunities. It empowers students to effortlessly unearth part-time work, internships, and campus events that resonate with their interests and skill sets, ultimately fostering financial independence and professional growth.

**Key Advantages:**

1. Campus-Customized: Beehive is exclusively crafted for SFSU, ensuring that each feature caters directly to the unique requirements and interests of the campus community.

2. Connectivity and Convenience: Beehive's user-friendly interface actively encourages meaningful interactions among students, establishing it as an invaluable tool for personal and professional advancement.

3. Simplified Employment Pursuit: The seamless integration of on-campus job listings simplifies the job search process, facilitating students' discovery of opportunities that harmonize with their academic journeys.

4. Elevated Campus Experience: Beehive enhances the overall SFSU experience by facilitating student engagement with campus life, enabling them to discover events, and encouraging connections with like-minded peers.

**What Sets Us Apart:**

The distinctiveness of Beehive lies in its unwavering focus on SFSU, ensuring that each facet serves the distinct needs of the campus community. By amalgamating social interaction and employment prospects into a single application, Beehive creates a holistic ecosystem that empowers students to maximize their time at SFSU.

**Our Team:**

The Beehive team is a collective of passionate and forward-thinking students who possess an intimate understanding of the unique challenges and opportunities that characterize the SFSU community. We have pooled our talents in software development, design, and business development to bring Beehive to life—a platform conceived by students, for students. Our dedication to enhancing the SFSU experience is the driving force behind our mission to establish Beehive as the go-to app for every SFSU student.

In conclusion, Beehive is poised to become an indispensable component of the SFSU campus ecosystem. We warmly invite you to join us on this exhilarating journey as we revolutionize the way SFSU students connect, collaborate, and thrive. With Beehive, we're not merely building an app; we're fostering a more robust, interconnected SFSU community. Join the Hive today!

**PERSONA AND USER STORIES**

**ID:01**

Persona: Penny Carter

* Penny, who is 20 years old, is an active student who dorms in San Francisco State University and majors in Communications. She dorms with 3 roommates who she doesn't like to be around because they are all loud, messy, and rude. She is a social media enthusiast who is always up to date on trending topics and news.
* Every morning, she gets ready for the day and surfs through social media apps(instagram,twitter,etc) while eating breakfast. She creates tasks to do everyday to keep her busy since she has a lot of time on her hands and when she finishes her daily tasks, she goes back to finding viral/trending content and engages with the other million users that enjoy the same content.
* General Behavior:
  + Actively tweets daily about personal life, and share trending posts
  + Surfs the web to find and network with professional users
  + Interacts with her followers and communicates with peers/colleagues
* Interests:
  + Building a network of connections
  + Knowledge of viral and trending news
* Skills:
  + Networking
  + Time Management
  + Collaboration
  + Social Media Engagement
* Pain Points:
  + Has too much time and needs to stay busy
  + Doesn’t have a job but feels that it would keep her busy through the day

User Story:

* Penny has extra time and wants to quickly pick up a job nearby to fill up her empty time slots
* Constraints:
  + Penny should be able to receive urgent local job applications, upload a resume to her profile for recruiters to look into

**ID:02**

Persona: Steve Hope

* Steve, who is 18 years old, fresh out of high school, is a news enthusiast. He lived in New York and now attends San Francisco State University. He enjoys participating in clubs and organizations such as debate and journalism.
* On a daily basis, he starts by checking news apps, and social media to check if anything major has occurred. On a weekly basis, he will listen to podcasts gaining knowledge and to see different perspectives. In the evening, he spends time researching and writing articles for the school newspaper and blogs.
* General Behavior:
  + Looks into news outlets, and articles
  + Likes to surf twitter and share/retweet important articles
  + Enjoys engaging in discussions that are related to current events
* Interests:
  + Staying informed about local and global news, even breaking news
  + Likes to engage in discussions and debates with peers
  + Enjoys reading articles and keeping up to date with podcasts
* Skills:
  + Critical thinking and fact-checking skills
  + Finding and sharing relevant news articles and stories
  + Debating and arguing formally
  + Researching reliable sources
* Pain Points:
  + Sorting through misinformation and fake news
  + Managing too many information
  + Dealing with the emotional toll of consuming distressing news
  + Ensuring privacy and security while engaging in sensitive discussions.

User Story:

* Steve wants to publish stories and articles on an application, so that anyone can see his post to comment on and to share
* Constraints:
  + Steve should be able filter his field of interest then be able to interact with other people on the application specifically about his field of interest making it so that networking is easier

**ID:03**

Persona: Jacob Parker

* Jacob is a Sophomore attending San Francisco State University who is undeclared for the time being. He lives off campus and commutes from his house which is not too far. When he gets to campus and gets through class, he hangs with his friends for a bit and heads back home. After finishing school work, he spends the rest of his time competitively playing video games. He really enjoys FPS games.
* Every weekend, Jacob will practice with some friends in his game working on strategies/tactics, and his aim to stay sharp. He wants to become a known video game player and make a name for himself. So occasionally he would want to stream on his free days even when he had a low viewer count.
* General Behavior:
  + Enjoys engaging in conversations related to the gaming industry
  + Likes to give tips about video games and his experiences
* Interests:
  + Gaming topics
  + Streaming gaming content
  + Esports(following pro players,events,teams)
  + Content Creating(Game highlights, entertainment, edit and upload youtube videos)
  + Aspire a career in the gaming industry
* Skills:
  + Gaming Knowledge
  + Communicating (communicate with anyone that talks in his streams, will answer questions, give personal takes on topics)
  + Networking, building a connection with other gamers, gaming industry professionals
  + Content creating(video editing, streaming)
* Pain Points:
  + Difficult time to balance gaming and career goals
  + Finding a job in the gaming industry as a student
  + Toxic players in gaming community

User Story:

* Jacob wants to get a job in the gaming industry where they would enjoy his content and personality. His career goal lies in the gaming industry and would like to get started in his career
* Constraints:
  + Jacob should be able to show his personality and professional life and get recruited by companies that are interested in his content

**Data Definitions | Yellow methods require log in to be utilized**

messageFunc – functionality to support direct messaging between logged-in users

jobApp – functionality to support the ability to post job positions and applications for said jobs

removeUser – removes user from database, acts as delete account function

addUser – when user signs up for account, user is added to database

reportFunc – allows users to report other users for NSFW content or breaking TOS

mediaShare – allows users to post pictures, videos to app, must be logged in

profilePage – central page for each individual user, can edit header, profile picture, resume, etc.

apiLink – allows functionality to link profiles together (our app can link with IG, Twitter, etc.)

timeline – main page will function as a timeline of content for user to look through

security – passwords for each user

login – logs user into app for use

otherLogin – allows user to create an account using google, apple, fb accounts

MySQL database will hold user IDs, passwords, emails, any media they share

eventsFunc – allows users to look through a tab of events that employers and companies would like to share

notifications – allows users to receive notifications when they receive a new message, new event, etc.

likeFeature – allows users to like media, events, etc.

shareFeature – allows users to share media by copying link

commentsFeat – allows users to make comments on posts and events

profanityFilter – disallows words that are commonly associated as NSFW

searchFeat – allows users to search for specific posts, users, companies, or events

**Initial List of Functional Requirements**

### **Requirement ID: 01**

* Title: User Registration and Profile Management
* Description: Enable users to register, create, and manage their profiles with privacy settings.
* Priority: High
* User Story Reference: Users want to register and manage my profile so that I can personalize my experience on the platform.

### **Requirement ID: 02**

* Title: Job Posting and Application
* Description: Employers can post job openings; users can search, view, and apply to jobs.
* Priority: High
* User Story Reference: Users want to view and apply to job postings that match my skills and preferences.

### **Requirement ID: 03**

* Title: Networking
* Description: Users connect with other students, alumni, and employers and utilize messaging and discussion boards.
* Priority: High
* User Story Reference: Users want to connect and communicate with other professionals to expand my network.

### **Requirement ID: 04**

* Title: Notifications and Alerts
* Description: Customizable notifications and alerts for users about new job postings and application status updates.
* Priority: Medium
* User Story Reference: Users want to receive timely alerts and notifications to stay informed about opportunities and updates.

### **Requirement ID: 05**

* Title: Job Matching and Recommendations
* Description: System recommends jobs to users based on their profiles, preferences, and search history.
* Priority: High
* User Story Reference: Users want to receive job recommendations that align with my career goals and skills.

### **Requirement ID: 06**

* Title: Learning Resources and Career Advice
* Description: A repository for career-related articles, videos, and advice from professionals and counselors.
* Priority: Medium
* User Story Reference: Users want access to resources and advice to make informed career decisions.

### **Requirement ID: 07**

* Title: Event Calendar and Scheduling
* Description: Users can view, register for events, and book appointments with counselors or recruiters.
* Priority: Low
* User Story Reference: Users want to schedule appointments and register for events to enhance my career knowledge.

### **Requirement ID: 08**

* Title: Security and Data Protection
* Description: Implement secure login and data protection measures to ensure user privacy and data compliance.
* Priority: High
* User Story Reference: Users want my data to be secure and my privacy to be respected to trust the platform.

### **Requirement ID: 09**

* Title: Accessibility and Responsiveness
* Description: The platform should be accessible and responsive across devices and for users with disabilities.
* Priority: High
* User Story Reference: Users want to access the platform seamlessly, regardless of the device I am using or any disabilities I may have.

### **Requirement ID: 10**

* Title: Advanced Search and Filtering
* Description: Users can perform advanced searches with filtering options to find jobs, people, and content.
* Priority: Medium
* User Story Reference: Users want advanced search options to find opportunities and connections more efficiently.

### **Requirement ID: 11**

* Title: Direct Messaging
* Description: Users should be able to send and receive private, secure messages to/from other users, allowing for direct communication between students, alumni, and employers.
* Priority: High
* User Story Reference: As a user, I want to send and receive private messages to communicate directly and securely with other users.

**List of Non-Functional Requirements:**

1. Performance/Scalability:

* Should render text, images, video, and audio within 1 to 5 seconds as a response time.
* Should support up to 20k - 25k students and handle up to 100 visits per hour while maintaining the 1 to 5 second response time.

1. Portability/Compatibility:

* Windows 8+ (Mac as well?).
* Chrome and Safari browsers.
* Mobile browsers

1. Reliability/Maintainability/Availability:

* Delay and/or failure may be expected upon initial release.
* Code on the master branch should be well maintained and working all the time.

1. Security:

* Student ID
* Password
* Email

1. Localization:

* Language: English.
* Spelling: American English.
* Time Zone: Pacific Time (PT).
* Currency: US Dollars (USD).

1. Usability:

* User-friendly.
* Personalization feature(s)

1. Database:

- MongoDB database

- Easy link between Express and DB

**Competitive analysis**

| Features | Our Product | Instagram | LinkedIn | Twitter / X |
| --- | --- | --- | --- | --- |
| User experience | Mix of social media and Job searches | Social media | Job searches | Social media |
| Comparing | Allows to compare two different job applications | Does not have a search for job applications | No comparing feature | Does not have a search for job applications |
| Auto resume | let’s users create their own resume fast and easy | No resume creation | resume built based on LinkedIn profile | No resume creation |
| Listing of jobs already applied for | shows which jobs you have already applied for | no job search | does not show whether or not you have applied to the job yet | no job search |
| Privacy | Allows to hide the amount of your followers and following from everyone | Only way to hide followers and following is when the other user does not follow you | No official way of hiding followers and following | Only way to hide followers and following is to block the other user |

Our planned product will be a mixture of social media and job searches. This allows users to be able to be social and connect with others while also being able to look for jobs around the area. Some advantages that our product has that others in the market do not have are a comparing feature, auto resume, listing of jobs already applied at, and a hide mode. The comparing feature allows you to be able to compare two different jobs side by side. There is also an auto resume section that lets you fill out a resume quickly and easily. You would also be allowed to update it at any moment. Our product will also have a listing of jobs that you have already applied at so therefore you would not have to go back and ponder whether or not you have applied to that job yet. Lastly, we have a Hide mode that allows you to hide the amount of your followers and following. The purpose of this feature is to make everyone feel comfortable and safe with no pressure of having a big following.

**High Level System Requirements**

1. Server Host: Google Compute Engine EC 2 1vCPU 2 GB RAM
2. Operating System: Ubuntu 16.04 Server
3. Supported browsers: Google Chrome, Safari, Mozilla Firefox, Brave, Microsoft Edge
4. Database: MongoDB 6.0.10
5. Web Server: Apache 2
6. Server-Side Language: ReactJS
7. Web Application Framework: Express
8. Additional Technologies:  
   IDE: VSC

Based on our familiarity, we set up the following study plan.

\*(L) - Lead

* Javascript
  + Who: Pearl, Ben, and Aaron
  + Expected goal by the next 4 weeks:
    - Complete basic features of a social media platform.
* Google Compute Engine
  + Who: Matthew, Satvik(L)
  + Expected goal by the next 4 weeks:
    - Configure the Google Cloud and MySQL database server.
* React (JS)
  + Who: Aaron, Ben, and Pearl
  + Expected goal by the next 4 weeks:
    - Design the basic landing pages for the social media website.
* NodeJS (Express)
  + Who: Matthew, Satvik(L)
  + Expected goal by the next 4 weeks:
    - Complete REST API that supports the website.
* MongoDB
  + Who: Sungmu, Satvik(L)
  + Expected goal by the next 4 weeks:
    - Support MongoDB functionality, replace MySQL.
    - Create a database that supports the website and log in features.

**CHECKLIST**

* Team found a time slot to meet outside of the class **DONE**
* Scrum Master shares meeting minutes with everyone after each meeting. **ON TRACK**
* Github master chosen **DONE**
* Everyone sets up their local development environment from the team’s git

Repo. **DONE**

* Team decided and agreed together on using the listed SW tools and

deployment server **DONE**

* Team ready and able to use the chosen back/front-end frameworks. **ON TRACK**
* For each technology (front/back-end/DB/cloud) , team decides who will

lead the study of each technology and what will be the specific goal of the

study within one month from the M1 announcement. **DONE**

* Implement DB scheme for login features
* Team lead ensured that all team members read the final M1 and

agree/understand it before submission. **DONE**