# SW Engineering CSC 648/848 Fall 2024

### **GAITOR GATE**

Section 02

Team 3

URL: http://18.222.76.244:8000/

**Team Lead**: Jared Aung (yaung2@sfsu.edu)

Front End Lead: Ulices Gonzalez

Back End Lead: Andre Dargani

Github Master & Front End Engineer: Mowtee Sailan

Front/Back End Engineer: Marco Barraza

Back End Engineer: Sergio Aguilar

Department of Computer Science, San Francisco State University

Professor. Henry Villar

April 22nd, 2025

#### **History Table**

Version	Date Submitted	Date Revised	Description
1.0	05/12/2025		Initial Submission

### 1. Product Summary

**GAITOR GATE** is an intelligent and streamlined search engine that helps users discover, filter, and engage with software tools tailored to their needs. It simplifies the tool discovery process by offering advanced filtering options and recommending tools favored by the community.

Designed for students, professionals, and researchers seeking AI tools, as well as for AI developers and companies to showcase their tools, GaitorGate provides a clean and intuitive UI/UX. Its goal is to make the complex process of finding the right tool simple, secure, fast, and user-centric.

#### Committed P1 Functions Deliverables

- 1. Users can register for an account, log in, and log out securely.
- 2. Users can search for tools using natural language text and keywords and filter results by Category (Academic Assistance, Productivity, Career Development, Code Assistance, Mental Health Support, Creative Applications) Platform (Web application, mobile application, browser extension, API), and publishing year.
- Search results are displayed in a paginated format with tool thumbnails, descriptions, and links to a dedicated tool page where users can find out more information about the specific tool.
- 4. Unregistered users shall only be authorized to use the search functionality and chatbot.
- 5. Logged-in users can rate a tool on a scale of 1 to 5 and leave reviews for tools and view other users' reviews.
- 6. The registered users shall be able to favorite and unfavorite tools.
- 7. The search query shall be added to the search history of a registered user. The user shall have access to their history and be able to delete history records.
- 8. The search results shall be ranked by highest rated to lowest by default but the user shall be able to change the ranking in terms of the following (alphabetical, highest reviews, recency)
- 9. The system shall offer similar UI/UX and different functionalities for different types of account (Student, General Public, AI Developers & Companies).
- 10. Users with company accounts shall be able to upload tools, edit their tools and access user engagement on their tools (ratings and reviews)

#### 2. Milestone documents

Milestone 1 Document	
Milestone 2 Document	
Milestone 3 Document	
Milestone 4 Document	

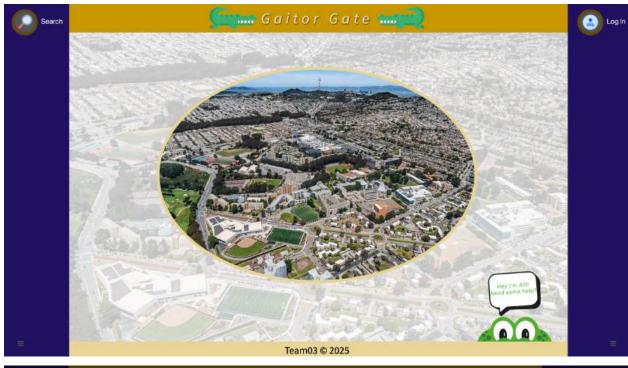
For Milestone 1, we received feedback highlighting several areas for improvement and refinement. On the title page, we were asked to clearly list each team member's role, which we have now updated accordingly. The executive summary was noted as being on the right track but needed a clearer structure, more explicit focus on the problems GAITORGATE solves, and a stronger conclusion. We addressed this by stating unique features such Alli Gator chatbot and advanced filtering. Our personas were well-received but required more detail on user behavior and technical comfort, as well as a more structured format, which we implemented in our revision. The list of main data items and entities was approved without any required changes. For the initial functional requirements, we were encouraged to add more specificity regarding AI tool matching, user feedback systems, and scalability. These suggestions were incorporated to provide better clarity and support for future development.

For Milestone 2, we received positive feedback noting that our documentation is well-structured and demonstrates a strong grasp of project requirements. Our prioritized functional requirements were clear and detailed, with only minor suggestions to improve numbering, justification, and consistency. We addressed these by refining the numbering scheme and clarifying the reasoning behind our prioritization tiers. The UI mockups and storyboards were conceptually solid, but formatting needed improvement. We responded by adjusting the spacing, alignment, and labeling to improve clarity and readability. Our database design was recognized as being on the right track, but the ERD diagram required better clarity in showing relationships and data flow. We revised the diagram to enhance visual communication and ensure accurate mapping of entity relationships. Both the CEO/CTO and instructor feedback emphasized that we are on track and encouraged us to stay ahead by focusing on refining the prototype and continuing to address feedback moving forward.

For Milestone 4, we received feedback acknowledging the quality of our overall testing design plan and documentation. The CEO/CTO advised us to finalize clear descriptions of what makes GAITORGATE unique compared to competitors, which we addressed by revising our executive summary to explicitly highlight features like Al-driven summaries with citations, and community-based tool recommendations. The instructor confirmed we are on track, with minor improvements needed. We took this into account by refining key documentation sections for clarity and completeness. With feedback incorporated, our focus now shifts to polishing the product and preparing the final deliverables for Milestone 5.

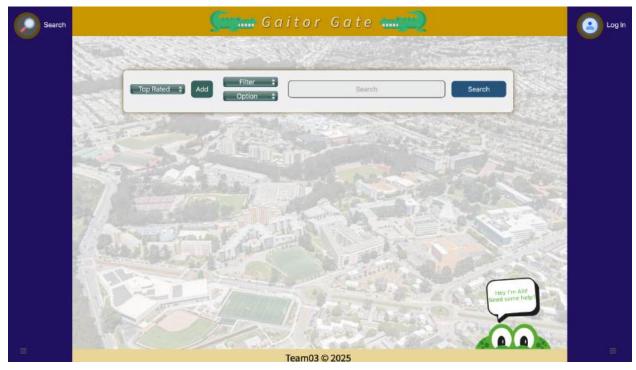
## 4. Product Screenshots

# Landing page

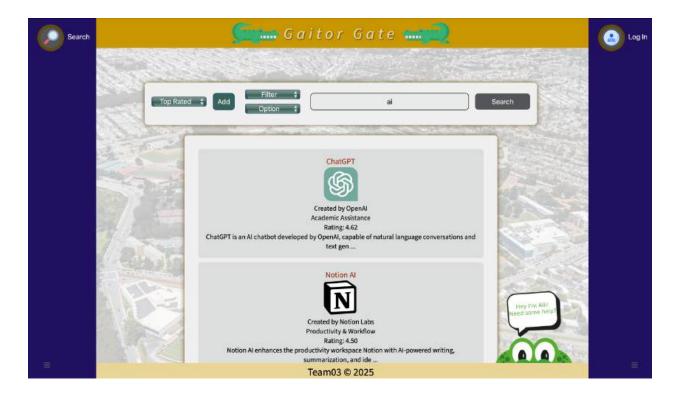




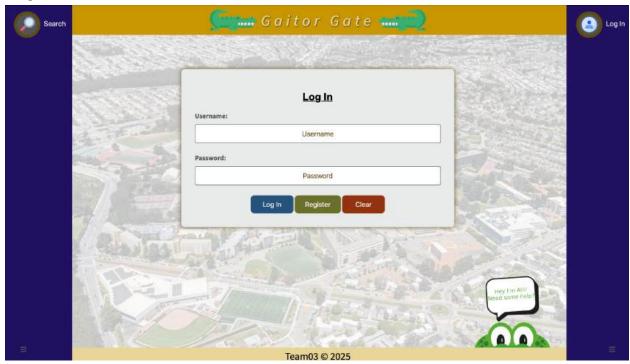
## Search



# Search (AI)



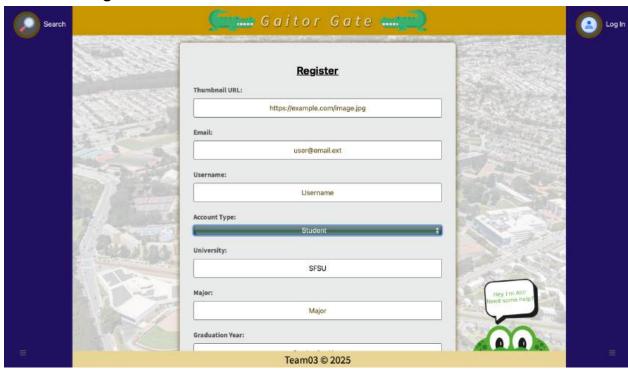
# Login screenshot



# General Register



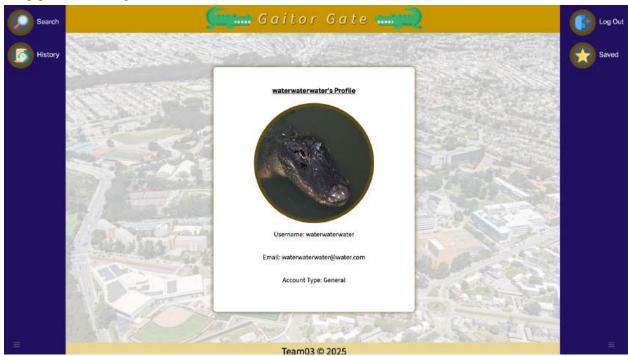
# Student Register



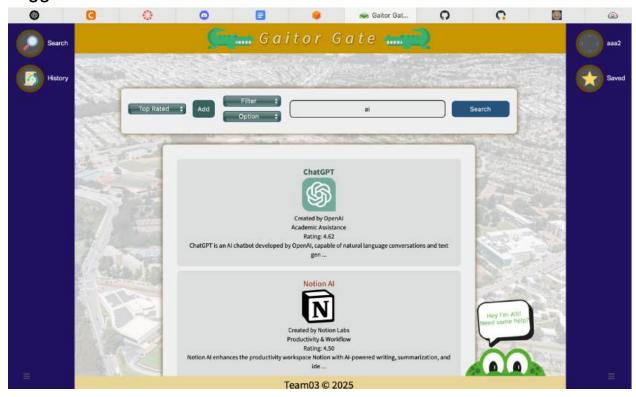
# Company Register



# Logged In Page



# Logged In Search



## No Search Result Page



## Added to Favorites



# Saved Page ( Clearing saved )



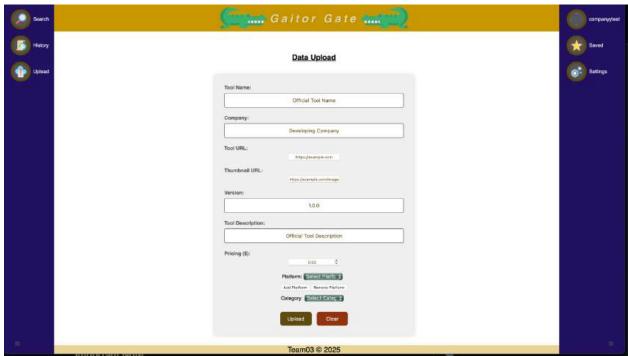
# History Page



# History Page ( After Clear History )



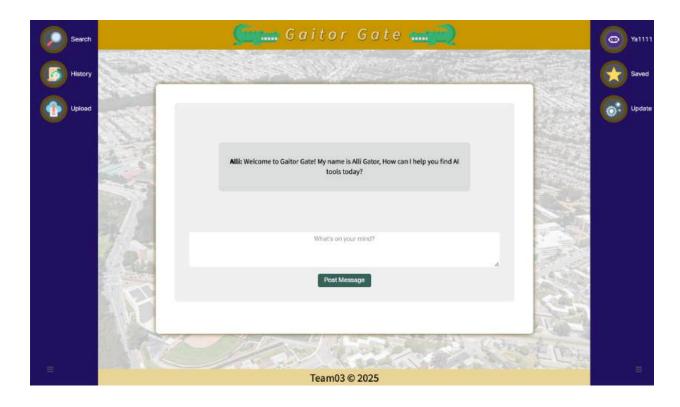
# Data Upload



## Data Update



### Chatbot





# 5) DB table

## DataBase Id account

Account	idUser	username	email	Account_Type	is_verified
1	1	hvjv	dddd	1	0
2	2	test	test@gmail.com	i	0 1
3	3	gaitor	gaitor@sfsu.edu	i i	j 0 j
4	4	fdg	fgdg@gmail.com	Ì	0 1
5	5	rgddrg	gfbfg@gmail.com		0
6	6	fdskjnf@#@!#&*	fsdfsd@gmail.com	i i	0 1
7	7	testuser	test@test.com	į.	0 1
8	8	ulicessgg	sergioulicesgonzalezguerrero@gmail.com	Company	0 1
9	9	8888	user@gmail.com	100000000000000000000000000000000000000	9 1
10	10	jar1	ddd@gmail.com	Ì	0 1
11	11	sheesh	user@tset.com	į	j 0 j
12	12	change	change@gmail.com	į į	9 1
13	13	usrnme	usr@gmail.com	1	j 0 j
14	14	bcrypt	bcrypt@gmail.com		, ø j
15	15	gate	gate@gmail.com		9
16	16	jared	jar1@gmail.com		. e i
17	17	jaredA	jared@gmail.com	i i	j øj
18	18	ttt1	far@gmail.com	i	i e i
19	19	ulimannn	ulimannn123@gmail.com	Company	j 1 j
20	20	Yaa1	ya@gmail.com		i ei
21	21	water	syrup-gender-santa@duck.com		i e i
22	22	waters	water@water.com	i i	i øi
23	23	testing	gg@gmail.com		9 1
24	24	gwerty	gwerty@gmail.com		e i
25	25	บบบ2	uuu@gmail.com	i	i ei
26	3	000	t@gmail.com	General	i éi
27	26	qqq1	testing@gmail.com	General	i e i
28	27	OpenAI	openai@gmail.com	Company	i e i
29	28	Midjourney	midjourney@gmail.com	Company	i e i
30	29	Grammarly	grammarly@gmail.com	Company	i e i
31	30	Notion	notion@gmail.com	Company	e i
32	31	CopyAI	copyai@gmail.com	Company	i e i
33	32	Runway	runway@gmail.com	Company	i e i
34	33	Descript	descript@gmail.com	Company	i e i
35	34	GitHub	github@gmail.com	Company	i ě i
36	35	Team3	team3@gmail.com	Company	ěi
37	36	Anthropic	anthropic@gmail.com	Company	ě
38	37	testing1	testing123@gmail.com	General	i ē i
39	38	username	email@gmail.com	General	ě
40	39	testUli	testingscript@gmail.com	General	i ĕi
41	40	user	user@email.txt	General	ě
42	41	usrname	m@email.txt	General	ě
43	42	iii0	ye@gmail.com	General	ě
44	43	studentTest	studentTest@gmail.com	General	
45	44		pretty-palm-slip@duck.com	General	ě
46	45	serg	sergio@sfsu.edu	General	ě
47	46	reps	reps-spree-jumbo@duck.com	General	i ë i
48	47	hapoma4874	hapoma4874@idoidraw.com	General	
49	53	serg111	sergiof 2001@hotmail.com	Student	1 1
50 I	7.7	Ya1111	vaa2@gmail.com	Company	ė

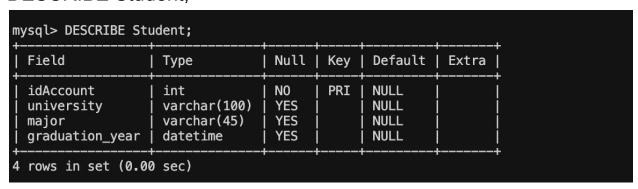
### **DESCRIBE** Account

Field	Type	Null	Key	Default	Extra
idAccount	int	NO	PRI	NULL	auto_increment
idUser	int	NO	MUL	NULL	300
email	varchar(255)	NO	MUL	NULL	i
hashed_password	varchar(225)	NO		NULL	İ
created_at	timestamp	YES	į l	CURRENT_TIMESTAMP	DEFAULT_GENERATE
username	varchar(50)	YES		i NULL —	
Account Type	enum('General','Student','Company')	i NO	i i	General	ï
profile pic url	varchar(255)	YES	i	NULL	i
is verified	tinyint(1)	YES		i ø	i

## DESCRIBE User;

Field	Type	Null	Key	Default	Extra
idUser	int	N0	PRI	NULL	auto_increment
name	varchar(45)	N0		NULL	
DOB	date	YES		NULL	

### **DESCRIBE Student**;



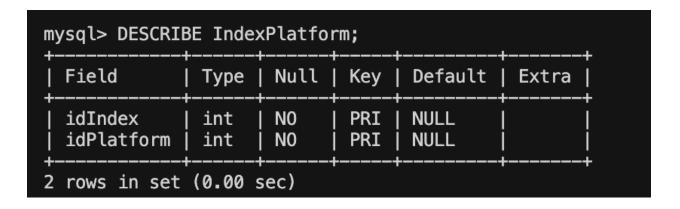
DESCRIBE User\_Sessions;

Field	Type	Null	Key	Default	Extra
idUser_Sessions	int	N0	PRI	NULL	auto_increment
idAccount	int	NO	MUL	NULL	
start_time	timestamp	YES	ĺ	CURRENT_TIMESTAMP	DEFAULT_GENERATED
end time	timestamp	YES	ĺ	NULL	

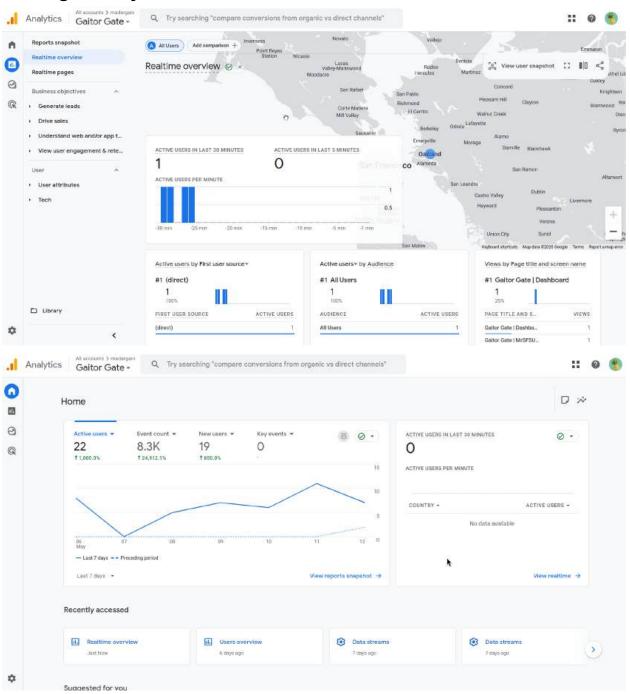
## DESCRIBE Tools;

Field	Type	Null	Key	Default	Extra
idTool	int	NO	PRI	NULL	auto_increment
name	varchar(255)	i NO	MUL	NULL	
company	int	YES	MUL	NULL	ľ
url	varchar(255)	NO		NULL	
timestamp	timestamp	YES	į	CURRENT_TIMESTAMP	DEFAULT_GENERATED
thumbnail_url	text	YES	İ	NULL	<u> </u>
published_date	datetime	YES	İ	CURRENT_TIMESTAMP	DEFAULT_GENERATED
version	float	YES	İ	NULL	- <del>-</del>
pricing	varchar(70)	YES	İ	Free	
description	text	YES	İ	NULL	

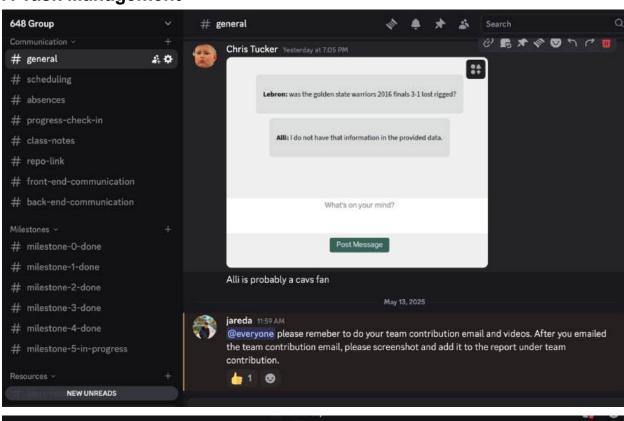
## DESCRIBE IndexPlatform;

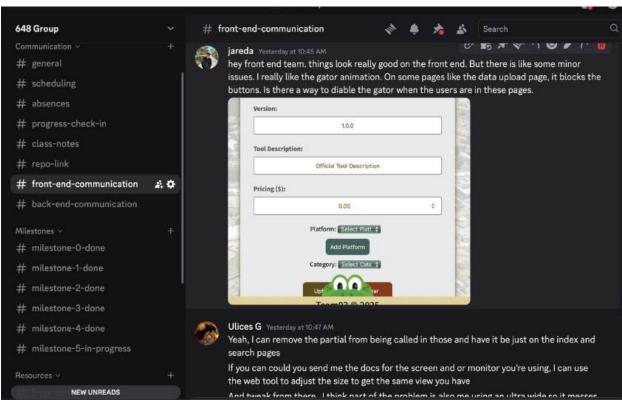


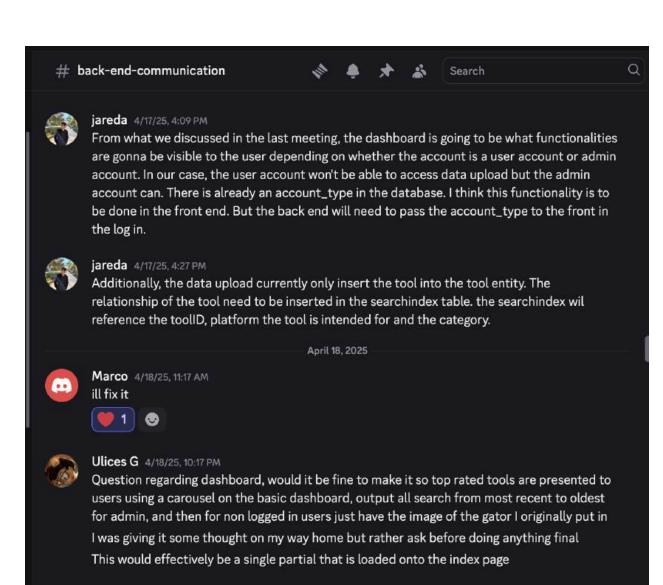
## 6. Google Analytics

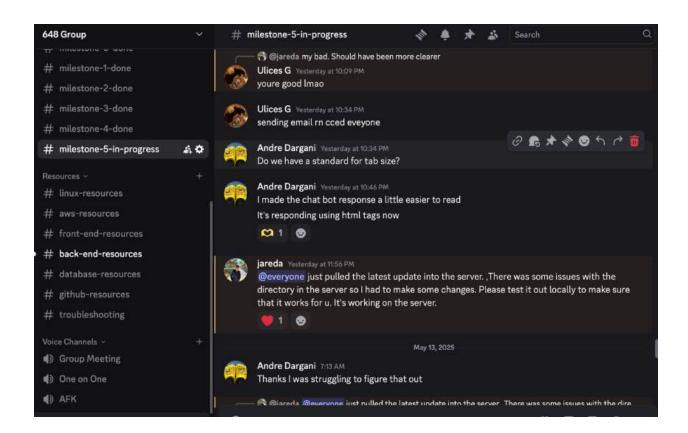


### 7. Task Management



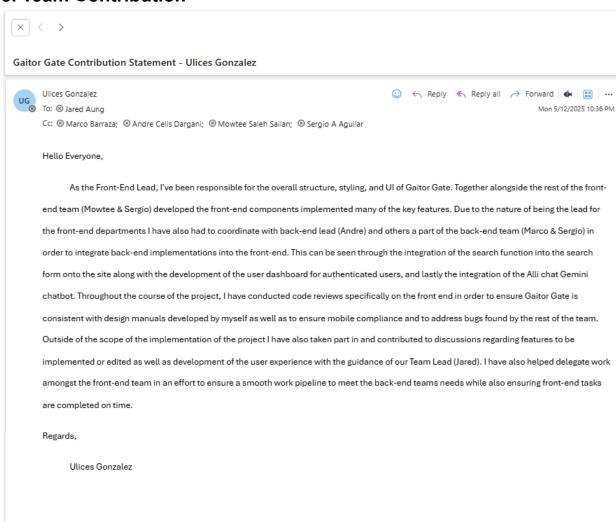


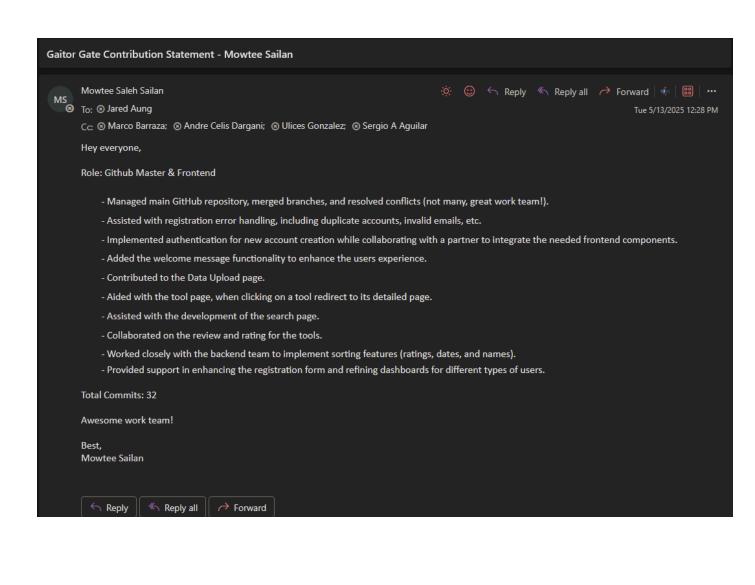




#### 8. Team Contribution

≪ Reply all





#### Gaitor Gate Contribution Statement - Andre Dargani



Andre Celis Dargani

AD ⊗ To: ⊗ Jared Aung



Cc: 

Marco Barraza; 

Ulices Gonzalez; 

Mowtee Saleh Sailan; 

Sergio A Aguilar

Hi team,

As the back-end lead, it was my job to design the back-end structure of Gaitor Gate. I designed the file structure for the flask application to be modular so that routes are organized by feature and that adding features would be easy. I also contributed to functionality of the search function. I mainly contributed to the filtering and sorting aspect of the search function. I was also in charge of implementing analytics for our website allowing us to view the trend of active users on our website. Finally, I worked on our chat bot, Allie. I created the POST request route that allows us to send and receive messages from Allie and I designed a prompt that would allow Gemini to respond with information from our database. As back-end lead it was also my job to delegate tasks to the rest of the back-end team, however our team lead, Jared, did a better job at this. He deserves all the credit for coordinating the efforts of the back-end team. In total I made 22 commits to the repository.

Thanks for a great semester! I'm lucky to have you all as my teammates.

Best,

Andre Dargani









Tue 5/13/2025 3:18 PM

To: 

Ulices Gonzalez

Cc: ⊗ Marco Barraza; ⊗ Andre Celis Dargani; ⊗ Sergio A Aguilar; ⊗ Mowtee Saleh Sailan

Hey everyone

As the team lead, database engineer and fill-in back end engineer, I tried my best to contribute to the team and group in as many as I can.

- I designed the entire database making sure that it is ideal to the purpose of our project and maintain normalization and scalability.
- I cleaned the raw dataset to create one that contained all the information needed in the database and then created a readcsv.py to bulk-insert around 150 tools into the database, to be used as search results.
- I configured the AWS server and fixed anytime there is a server issue or deployment issue. I made sure that the code being designed works as intended on the server.
- 4. I designed the data upload in the backend so that companies can upload their Al tools.
- I designed the back end for view-tool which allows users to access detailed information about the tools from the search results.
- I regularly communicated via Discord organizing meetings, setting deadlines, and trying to delegate work evenly while respecting everyone's time and workload.
- I designed the back end of ratings and reviews. So that users can rate and reviews tools as well as average rating of the tool and the reviews given to the tool by other users.
- I also helped define the expected functionality of each page and backend feature, providing guidance and structure while encouraging creativity and offered constructive criticism when needed.

Thank you everyone. It was great working with all of you.



Sergio A Aguilar

To: ⊗ Jared Aung; ⊗ Marco Barraza; ⊗ Ulices Gonzalez; +2 others









Tue 5/13/2025 2:39 PM

## Hi everyone,

Role backend/tester:

- Wrote lines of code which would be used a stepping stones for the rest of the group
- Help out in testing out the product in all ways, from checking every link to trying new account emails
- Contributed to ssh development
- Organized file structures to work seamlessly with the production side.
- Contributed to the clear all history, and remove of favorites
- Provided support when needed by the team
- As well as took digital shots of the final product

Phenomenal work team.

Best,

Sergio A

## Gaitor Gate Contribution Statement - Marco Barraza Today at 2:13 PM ® Marco Barraza <mbarraza@sfsu.edu> MB To: ⊗ Jared Aung; Cc: ⊗ Andre Celis Dargani; ⊗ Ulices Gonzalez; ⊗ Mowtee Saleh Sailan; +1 more ∨ Hi Everyone, Role: Backend I contributed to the project by supporting system design through the creation of high-level UML diagrams. I implemented several key backend features, including the user register route and login/logout functionality using Flask-Login. I also developed the dataUpload and dataUpdate routes to manage tool information and user input. Additionally, I built the main dashboard (/ route), which dynamically displays tool data and reviews and is tailored based on whether the logged in user is a company or a student/regular user. Great work team! Total commits: 56

Best.

Marco Barraza

### 9. Post Analysis

Subject: Post Analysis

Hi Team,

Thank you all for your dedication towards the project, your sense of responsibility in delivering your parts, and the willingness to offer help and ideas throughout the semester. I think we've built a strong and functional product, and I've really enjoyed working alongside such hardworking, intelligent, and committed people.

As we wrap up, I want to take a moment to reflect on some challenges we faced, and how we might improve in future projects.

#### 1. Authentication on the Server

We weren't able to fully implement user authentication on the deployed server in a way that would properly identify each of us separately. While this didn't impact the overall product, it's a missed opportunity to practice more secure and scalable access control.

Looking back, this could've been addressed earlier if we had more confidence in AWS deployment and cloud configuration — something we all improved on by the end of the project.

#### 2. Database Implementation

The database design served the project well overall, but it could have been more efficient. Incorporating stored procedures, triggers, and functions earlier would have reduced some of the repetitive or complex backend logic and made data handling cleaner.

#### 3. Communication

We relied solely on Discord for communication and coordination. While it worked well in this project — thanks to everyone's responsiveness — it's not a scalable or structured approach for larger teams or longer-term projects. Tools like Trello or GitHub Projects could have helped us track tasks, dependencies, and deadlines more clearly and minimized any confusion. Additionally, having more number of meetings and structuring meetings to have Scrum-like format could have overall improved the efficiency of the progress and communication of the team.

Despite these challenges, we adapted well, and I'm proud of the work we did. Thank you again for your effort, teamwork, and the positive energy you brought to this project.

Good luck on your finals and everything ahead!

Best, Jared