SW Engineering CSC648/848

Application Name: NNSE
Section 02, Team 06

Name	Role
Anzara Ausaf	Team Lead / Frontend
Harris Chan	Git Master
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Milestone 1

February 18, 2025

Revision Table			
Revisions	Date	Author(s)	Description of Changes
1	02/18/2025	Team Members	Initial Draft
2	02/21/2025	Nicolas Carrillo	Personas Created, List of main data items and entities, High level system architecture
3	02/22/2025	Jiging Liu	Role Added
4	02/23/2025	Harris Chan	Competitive Analysis
5	02/23/2025	Anzara Ausaf	Functional Requirements
6	02/24/2025	Casey Steven	Non-Functional Requirements
7	02/24/2025	Michael Ho	Executive Summary
8	02/25/2025	Team Members	Final Draft

Executive Summary:

The “No Name Search Engine”, also known as “NNSE” or “No Name”, is a new way for people to seek out and get the assistance that they may need. We call it “No Name” because the important part is not its name, but all the different tools it can guide people to. No Name is an intelligent search engine that allows people to find and explore the most suitable AI tools and applications for their various academic, professional, and personal needs. No Name can benefit and assist a wide variety of users. Whether they are a college student looking for help staying on track, a company trying to start or improve their business, an AI developer looking to showcase and advertise their AI applications, or just anyone interested in exploring various options of AI tools for different purposes, No Name can help them get it done.

No Name allows users to search for AI tools across various categories. Such categories include academic assistance, productivity, career development, mental health support, creative applications, and more. Under academic assistance, students may find tools to help with things like checking grammar, punctuation, and proper citation of sources for papers. In the productivity category, any user may find tools to help with scheduling and planning. Students and workers could find tools to help them build or improve their resume under the career development category. All users could explore the mental health support category to help them get connected with a therapist or learn tips to manage and improve their mental health. Students and companies may look into the creative applications category to help them create or improve their website. These are only just a few examples of the sorts of categories and uses that No Name would allow users to explore. Additionally, users can search AI tools by their pricing, allowing them to find tools that fits within their budget. No Name also has an AI-powered chatbot that can assist users in finding the tools best suited for them based on their preferences. In order to help others make more informed choices, users can leave ratings and reviews on the AI applications. AI developers can register to be able to submit and manage listings for their AI applications.

PERSONAS:

Instead of the ⅓ page write up requirement professor said the Miro board we used is okay to turn in for this part of the ASMT so here is the link: link

List of main data items and entities:

User – Which is just a general term for individuals interacting with the platform. For this project we have different type of users ranging from Registered Users and Admin Users

Registered User – Is a user who has created an account and has additional privileges such as searching, saving, rating and reviewing AI Tools.

Admin – For this platform an Admin User has administrative privileges to manage AI businesses and tools.

AI Business – A company or organization that offers AI tools information on the platform.

AI Tool – A software or service offered by an AI business that users can search for, review, and save.

Search Query – A record of what a user searches for, including keywords and filters.

Favorites – A feature that allows registered users to save AI tools for future reference.

Ratings & Reviews – A system that lets users rate AI tools and provide feedback.

For now we are thinking of maybe doing a yelp based platform flow where we allow admins or businesses to add their business to the application so they can provide further details about their AI tools and company which is why we have Admin users as well as A Business model. By doing so registered users will be able to scroll, search, save and review companies who have added themselves to the platform and can go directly to their website to learn how to further implement the service to their desired projects.

Initial Functional Requirements

We are creating an AI search engine that is personal. A team of 6+ engineers, we have decided to name it “No Name Search Engine”. We came up with such a title since we believe in minimalism and the idea behind it was that we want to show its target audience that this search engine will be so easy to use and understand that it does not even require a name that you are required to remember. Let this search engine become your friend, your support, your teacher and advisor. Our dream is that the no name search engine will become your go-to for every question you might face in life. As we build this application we have envisioned certain functional requirements for our project, we hope to add more as we launch and begin but for now we plan to keep these features in mind throughout the development process.

Functions:

1. The Searching Aspect:

This search engine will provide basic search features to help individuals find AI tools which fall under categories of Academic Assistance, productivity, career development, mental health support and creative applications.

2. User Authentication:

We want our users to be able to sign up and login. This helps the user to keep track of previously viewed searches and AI tools if they wish to revisit them. Additionally, users can apply to be verified AI app developers, which will be able to post and showcase their own AI apps.

3. UI :

As mentioned in our introduction, we believe in a minimalistic design. Our Search engine will be on a clean interface that is easy to look at and not overwhelming. This will help the user engage with the knowledge they want to acquire instead of getting lost in design that is unnecessary.

4. Lists sidebar:

The application will store every chat bot recommendation conversation and they will be listed in a way that will be easy to access, manage and delete. We hope to make it visually appealing. The sidebar of conversations will also allow users to rename conversations (if they would prefer to) with a title they would like to mark and remember the conversation by.

5. List sidebar part 2:

The list of conversations side bar will also have a search bar if the user wants to look up a certain conversation(in order to find the correct AI tools). The renaming aspect of the sidebar also allows the user to look up the specific conversation more easily as they can title them according to their preference.

6: Cross-device synchronization:

User Conversations and search results will be accessible from all devices the user logs into. Allowing a smooth experience no matter the device the user chooses to use.

7. AI-Powered Tool Matching:

Users can input their needs, and the AI will recommend the best AI tools available. Example: A student looking for AI-powered research assistants will get recommendations for AI citation tools, summarizers, and research databases.

8. Bookmarking:

Users will be able to bookmark a certain search result they find useful instead of having to scroll through an entire re searched phrase. There will be a bookmarks tab where users can directly access what information they have bookmarked.

9. Exporting different files:

Users will be able to share images, PDFs, .txt , .mp4 files etc. for reference during their searching experience.

10. Interface mode:

Users will be able to toggle between different modes such as light mode/dark mode/any custom color for theme preferences. They will also be able to toggle different display modes that help to give the user an easy experience for their eyes such as night shift mode or be able to adjust warmer or cooler tones for their viewing experience preferences.

11. Citation generator:

For whatever AI program the user wishes to use, the citation feature automatically creates properly formatted citations, assisting them in avoiding acts of plagiarism and following honesty regulations.

12. Guest mode:

Users will be able to use the platform without having to register but that will remove the privilege to bookmark/save tools they found in their searches

13. Time Filter Options:

This advanced feature will allow users to filter their search results based on time. They can further filter their searches for time ranging from last 24 hours, past week, past month, past year, past decade, and all.

14. Learning Summarize Mode:

Users will be able to activate learning mode which will allow them to summarize the AI-tool information. Reading Documentation gets to be to much sometimes so by summarizing this it will allow for a better understanding from the user.

15. Feedback from Users:

Users will be prompted to give feedback after a successful AI tool implementation into their own project. This will allow for a growth in community and trust within the app.

16. AI-Generated Tool Descriptions & Reviews

AI can summarize user reviews and explain how AI tools work, helping users make informed decisions.

17. Language Preferences:

This feature will allow the user to set a language they are comfortable with from a list of languages provided by the search engine. E.g- English, Spanish, French etc.

18. The Translator tool:

This feature allows the user to translate a piece of information.

19. The Relevancy Filter:

Users can filter search results by relevance and content type (music, school, research, etc.)

20. Mental Wellness Support:

The Mental Wellness feature creates a safe, supportive space for users seeking AI-powered tools to enhance their emotional well-being. This thoughtfully designed interface helps users discover personalized mental health resources.

List of Non-Functional Requirements:

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0.
2. Application shall be optimized for standard desktop/laptop browsers, so it can render correctly on the two latest versions of two major browsers.
3. Selected application functions shall render well on mobile devices.
4. Data shall be stored in the team's chosen database technology on the team's deployment server.
5. Privacy of users shall be protected, and all privacy policies will be appropriately communicated to the users.
6. The language used shall be English.
7. Application shall be very easy to use and intuitive.
8. Google Maps and Analytics shall be added.
9. No email clients shall be allowed, webmail shall be used instead.
10. Any functionality for paying for goods and/or services shall not be implemented nor simulated in UI.
11. Basic best practices covered in class shall be applied for site security.
12. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development.
13. The website shall prominently display the following exact text on all pages *"SFSU Software Engineering Project CSC 648-848, Spring 2025. For Demonstration Only"* at the top of the WWW page.
14. May contain AI Chatbot capabilities as optional bonus requirements.

Competitive Analysis:

Feature	Google Search	Bing	DuckDuckGo	Yelp	NNSE
AI-Powered Contextual Understanding	Yes	Yes	No	No	Yes
Privacy-Focused	No	No	Yes	No	Yes
Ad-Free Experience	No	No	Yes	No	Yes
Customizable Background	No	No	No	No	Yes
Personalized Recommendations	Yes	Yes	No	No	Yes
AI-Generated Summarization	Yes	No	No	No	Yes

Our AI-powered search engine is a more respect-for-privacy and AI-centric search experience compared to other traditional search engines like Google, Bing, and DuckDuckGo. Unlike Google and Bing, whose ad-centric, data-gathering designs, my search engine is ad-free, privacy-first search. In contrast to Yelp, whose non-AI results, it lacks the filter search for AI products. In contrast to DuckDuckGo, whose non-AI results, but is privacy-centric, my search engine gives personal search options, along with AI-driven Contextual Comprehension. With intelligent AI capability and data security, my AI search engine is a cutting-edge search portal for delivering secure, timely, and accurate results.

High-Level System Requirements:

Server Host	Google Compute Engine
Operating System	Linux
Server Database	MY SQL
Web Server	NGINX
Server-Side Language	Javascript
Web Framework:	Express.JS

IDE	VS code
API	ChatGPT
Web Analytics	Google Analytics
SSL Cert	Let's Encrypt

SW COMPONENTS	DESCRIPTIONS
Frameworks ➔ React ➔ Vite ➔ Mantine	• Component-based architecture for building interactive user interfaces • Modern build tool for improved performance • Library of React components and hooks designed for rapid development of web apps
APIs ➔ Authentication	• Used during user registration
Tools and Systems ➔ Node ➔ Express.js ➔ MySQL ➔ Prisma ➔ Google Compute Engine ➔ NGINX ➔ Prettier ➔ ESLint ➔ GitHub Actions	• Runtime environment that allows JavaScript to be used outside the browser • Building APIs and Web Servers • Database management system • ORM tool that simplifies database queries and provides a clear structured definition of the database • Cloud infrastructure for running back-end services • High-performance web server serving static files, reverse proxying, load balancing • Code formatting tool • Code inspection tool, enforcing best practices and coding standards • automated testing tools to ensure code quality
Supported Browsers ➔ Chrome ➔ Firefox ➔ Edge ➔ Safari ➔ iOS(Safari), Android(Chrome)	

Deployment Platforms

- ➔ Vercel
- ➔ Google Compute Engine
- ➔ Google Cloud
- ➔ NGINX

- Efficient React Hosting Platform
- for hosting backends
- Database hosting platform
- Reverse proxy and web server

Approved Tools and Systems

- Google Compute Engine
- Linux
- MY SQL
- NGINX
- Javascript
- Express.JS
- VS code
- ChatGPT
- Google Analytics
- Let's Encrypt

Tools/APIs requiring approval

- ➔ React
- ➔ Vite
- ➔ Mantine
- ➔ Authentication
- ➔ Prisma
- ➔ Prettier
- ➔ ESLint
- ➔ Vercel

The Team: []

Student Name	Team Lead	Front End Team Lead	Back End Team Lead	Database Engineer	GitHub Master	Document Master	Team Member Front End	Team Member Back End
Anzara Ausaf	☑	☑	☐	☐	☐	☐	☑	☐
Harris Chan	☐	☑	☐	☐	☑	☑	☑	☐
Nicolas Carrillo	☐	☐	☑	☑	☐	☐	☑	☑
Michael Ho	☐	☐	☐	☑	☐	☐	☐	☐
Chance Vodnoy	☐	☐	☐	☐	☐	☐	☐	☑
Casey Steven	☐	☐	☐	☐	☐	☐	☐	☑
Jiqing Liu	☐	☐	☐	☐	☐	☐	☐	☑

Checklist:

Task	DONE	ON TRACK
Team found a time slot to meet outside of the class	☑	☐
Github master chosen	☑	☐
Team decided and agreed together on using the listed SW tools and deployment server	☑	☐
Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing	☑	☐
Team lead ensured that all team members read the final M1 and agree/understand it before submission	☑	☐
Github is organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	☑	☐

Team lead ensures that all members have read and understood this document.	Anzara Ausaf 02/25/2025