**PROJECT PROPOSAL**

**TrainE**

Version 3.0

Prepared By: Development Hell

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[Github Repository](https://github.com/DevelopmentHellaHell/SeniorProject)

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# [**Version History**](https://github.com/DevelopmentHellaHell/SeniorProject/tree/main/TrainE_ProjectProposal)

| **Version** | **Overview** | **Date** |
| --- | --- | --- |
| v1.0 | Team submission to Vong | September 8, 2022 |
| v2.0 | New format, Table of Contents, Competitors | September 14, 2022 |
| v2.1 | Revisions to: Introduction, Glossary, Version History, Competitors, Project Description Features, Formatting | September 15, 2022 |
| v2.2 | Revisions to: Introduction, Glossary, Competitors, Product Description Features, References | September 16, 2022 |
| v2.3 | Revisions to: Vision, Overall Grammatical and Stylistic Changes | September 17, 2022 |
| v3.0 |  | September 19, 2022 |

# **Glossary**

| **Term** | **Definition** |
| --- | --- |
| Goal | A task set by a Patron and agreed upon by the Trainer as the intended purpose for the learning plan. Completion of this task is synonymous with success in the learning plan. |
| Learning Plan | The composition of the timeline, milestones, and tasks relating to the completion of a patron’s set goal. |
| Milestone | Trainer-created tasks in similar style to a Patron’s goal, but on a smaller scale. These are intended to encourage the Patron towards their goal and celebrate their incremental successes. |
| Patron | A user of TrainE who uses the service to reach their own goals with the help of one or more trainers. |
| Progress tracking timeline | A visual element with Patron milestones and goals listed as points on it. As a Patron reaches milestones the bar is filled, culminating in a full bar once their goal has been reached. |
| Single-Page Application | An application which dynamically displays new information on the user’s current page when interacted with. |
| Trainer | A user of TrainE who uses the service to facilitate their teaching of one or more patrons. |

# 

# **Introduction**

Just about everyone can relate to the feeling of running out of time. Many would love to be able to work on themselves, picking up new skills and hobbies, but it can be difficult to get started. It is common to spend large amounts of time trying to find quality resources to learn these skills and hobbies, sometimes to no avail. Because of that, it is too difficult to devote the time and effort required for self-growth in such a fast-paced world.

On the other side of the coin, those who teach these people oftentimes struggle with scheduling and finding clientele. Dealing with their customers’ own individual goals, skills, and preferences can be a heavy burden on running a business. From communication method, to geographical location, to available schedule, no two Patrons are the same. Managing these small necessities reduces the time that trainers could be interacting with their clients.

TrainE is our solution. We offer a user-friendly platform for beginners and amateurs to connect with skilled Trainers to learn and improve on existing skills in a flexible, pain-free process. Trainers can showcase their skills to potential Patrons while allowing TrainE to act as a bridge of communication. This seamless process is aided with our intuitive bookmarking system which utilizes calendar milestones, activity goals, and progress tracking.

# **Project Description**

### **Value**

TrainE is designed for Patrons and Trainers for the purpose of making the training process as easy as possible. Patrons may be able to complete their long-term goals without wasting time finding quality resources, and Trainers can more easily advertise themselves to find motivated clients to teach.

1. Combine the most unnecessarily complex components of trying to find a Trainer (availability, quality, communication, etc.)
2. All-in-one scheduler of Patron-Trainer plans to prevent miscommunication and frustration while also encouraging steady progress towards an end goal
3. Improve/expand upon potential competitors’ current products (See Competitors section on [page 9](#_1yybswfodho4))

### 

### **Project Scope**

#### Application Type

TrainE will be a Single-Page Web Application to maximize internet usage. TrainE also aims to adapt to mobile device platforms, hence Single-Page Web Application provides the best flexibility in the future.

#### Supported Culture

Language: U.S English (en-US)

Unit: Imperial System (en-US)

With TrainE initially releasing in California for product testing and monitoring purposes as well as to ease the product into the market, the localization of the application will be in US English.

#### Supported Client

TrainE will support the Google Chrome browser (verson 104.x (64 bit)) due to its majority share of popularity among internet browsers. This ensures the greatest amount of support in its initial implementation.

#### Target Audience

TrainE aims to reach two groups of people, referred to in this document as Trainers and Patrons. Trainers are skilled individuals who wish to provide their training services. Patrons are individuals looking to learn a skill or long-term goal through lessons from a Trainer skilled in that field. This platform is intended to be based in California and be 14 years of age or older.

### **Product Scope**

TrainE as a complete application will include the following features and their scope:

#### Common Components:

Provide the backbone and common features of the application with basic security and user account protocol.

**Authentication features:**

In order for users to access features, including (but not limited to) creating user profiles, interacting with trainers, creating plans, reporting Trainers, reporting Patrons, and creating plans, users must register with an account to become authenticated. Along with this, they must be able to login to an existing account, logout of the current account, and delete their account.

Login requires a pre registered email and a matching password (with input constraints)

Logoutcan be a one button action to sign out of the current account, accessible anytime from the static menu.

**Authorization features:**

Different users will have access to different features in the platform. Although all authenticated users will be able to create a profile, view a calendar, and use the search function, only a Developer account will have full access to all other features as well. A Trainer account will be able to create learning plans and provide feedback for enrolled Patrons while a Patron account will be able to set goals and interact with the progress tracking timeline.

**Logging features:**

Automatic logging of application events in order to support the development team in the process such as action history, debugging, user support. Stores both user-interaction events as well as system processing events (that are relevant to the user).

**Log archiving:**

Offloading of the old log when starting up the web application, for the purpose of archiving and storing of the new logs of the current session.

**User management:**

This allows users to self-serve some basic features. There is an authorization binding for each type of account but overall, all account types would share some fundamental assignments.

* User registration: can be utilized by all level of users
  + Require a valid email. A user then needs to confirm by checking their email and clicking on the link we provide in the confirmation email to lead them back to the app page.
  + Require an 8-character alphanumeric password. Input constraints are all applied.
* Account recovery when users forget password or need to reset password. A user will be able to start the reset password process via a hyperlink on the login page. They shall click the link, enter the email that they registered with, and will be sent an email to reset their password, if that email is registered in the authentication server. On interaction with the link in the email, they will be directed to enter a new password that follows the requirements set forth in account registration.
* The ability to delete an authenticated user’s own account will be available to them through the editing of their own profile. Authenticated users are free to do so at any point as long as they have access to this page and wish to terminate their usage of the app. The user will have to confirm via a link sent to their email if they interact with the button to delete their account.
* Update profile information
* An administrative user must be able to update permissions to increase/decrease access privilege of other users

**Error handling protocol:**

Backend level work in processing users’ input and system output to make sure the application can handle the most anticipated errors, such as,

* We provide constraints for each users’ input to best maintain the integrity of the user database. When users’ input is invalid or not the right format, we will prompt users to re-enter the input again. They will not be able to move onto the next page if all the inputs don’t satisfy our constraints.
* Development process guarantees a solid runtime error guarding. Make sure users would not encounter runtime errors from their end.
* In case of a network error, a page can’t be found, or any occurred system errors, users will be led to a display message page to inform them of the problem. This landing page also gives them an option to go back to the previous page or the Home page.

**Analytic dashboard**

A better report of the app for admins, developers and stakeholders. To best understand users’ behavior and our features’ performances to adjust our application timely, a dashboard will display some measurement metrics only available for administration, such as,

* Dashboard Home Page: display a chart of users traffic, available in several views, filtered general traffic by time of the day, by active trainers, active patrons.
* Users counter: in 2 categories, trainers and patrons. We can depict our reach to the customers in a glance from the Dashboard. Also available in several views, filtered by demographic of users.
* Page clicks counter: sorted by the most visited. This shows how many visits the users pay to each page of the app. Therefore, we can analyze the level of accessibility of a specific page. Or whether the users are more or less interested in it.
* Report analytic: provide a table for reported pages, in ascending sorted fashion. This helps developers to catch and respond to errors accordingly.
* Printable report options give admin more flexibility in data analyzing

#### Specific App Features and Scope:

**Profile:**

Two different accounts will be available upon account registration depending on the user’s intent: Trainers and Patrons. Each account will have a dedicated profile page listing the user’s availability, interested topic, and in the case of a Trainer, a previewed plan for learning and Patron ratings. A report button is embedded into the profile page in the case of inappropriate behavior.

**Scope:**

* Able to configure the methods of user verification
* Authenticated users can upload a picture
  + Able to configure accepted file types
  + Ability to configure max size of uploaded file
  + Automatic scaling of uploaded file to limit server storage usage
* Unauthenticated users can view Trainer profiles
* Authenticated users can view all profiles
* Authenticated users can write and edit the contents of their respective page
* Authenticated users can generate a link to showcase their profile page

**User Acquisition:**

The use of multiple methods allows for a more user-friendly transition into the app, depending on a Patron’s preference. A Patron can sign up with Trainers via a search function or if they have a particular Trainer in mind they can use an invite code. The search function can filter results based on interest and availability. Patrons will also have Trainers suggest for them to reach a goal once it has been set within their profile. These all help to encourage an easy Patron-Trainer connection.

**Scope:**

* Able to configure recommendations to Patrons based on the Patron’s set goal
* Able to configure a user’s capability of generating a permanent invite code to Trainers and plans
* Authenticated users can generate randomized temporary invite codes to Trainers and plans
* All users can configure searches through for Trainers and plans
* While searching for trainers or courses, the search-bar may provide auto-suggestions on the query to complete their search
* A list of panels of similar courses will be displayed relating to the user’s query which would include the course, average rating, and other information
* Suggested classes will be displayed on the default search screen for patrons from their past search and browsing activities

**Plan Management:**

A clearly laid out plan will enable Patrons to know exactly what they need to be working on to progress their skills on a day-to-day basis. Patrons and Trainers will be able freely create and edit plans that they set along their journey. Once a Patron goal has been set, a Trainer can assign a learning plan to a Patron’s personal calendar to meet their goal. The learning plan can be modified based on each individual’s learning speed and goal due date. Trainers can add milestone events to the calendar to motivate Patrons towards their goal by celebrating their progress.

**Scope:**

* Able to configure method of viewing plans
* Patrons registered in a plan have view access to that respective plan
* Trainers can edit plan contents (milestones, tasks, descriptions, schedules)
  + Patrons registered in a plan can make suggestions to that respective plan or event
* Trainers have write and edit access over any plan they create before the plan is registered with a Patron
* Trainers can copy a plan
* Trainers can make suggestions to a plan or event that is already registered with a Patron
* Trainers can upload files to a task created

**Unified Calendar:**

To better coordinate learning plans with real-life commitments and schedules, a calendar will be provided on each Patron page. This calendar is an easy way for Trainers and Patrons to be synchronized on meeting dates, plans, and future milestones. The Trainers and Patrons will be able to select a date and propose a session meeting to their counterparts. Users can filter their calendars, clarifying the view for those who are enrolled in multiple plans. Exporting the calendar plan will be made simple for those who prefer viewing their own, everyday calendar.

**Scope:**

* Patrons can export many plans
* Users can click on a date to view the date details
* Users can click on a task to view the task details
* Trainers can configure a task from clicking on it

**Progress Tracking:**

Seeing concrete progress being made towards a goal will encourage Patrons to keep making headway through their learning plan. Visual results in learning can be observed through the calendar’s progress tracking function. The progress tracking function is represented as a timeline. Patron milestones will be viewable on the timeline. By creating and meeting milestones, a Patron can easily see the progress being made towards their end goal. Should a Patron wish to change their goal, they can coordinate with their Trainer to decide on the next course of action as well as whether or not the timeline should be altered.

**Scope:**

**Rating Systems:**

Patrons will have the ability to rate Trainers on the satisfaction of their interaction. Optionally, comments can be made on Trainer or Patron pages about their counterpart.

**Scope:**

* The rating scale will be 1 to 5 star system
* Ratings on a specific trainer will be publicly available on their profile where the average rating score of the user will be displayed as well as the breakdown of each rating score
* In addition to rating, there will be an additional comment section where users will be able to add an optional comment along with their rating which will be publicly displayed in a comment section
* The comment section will be able to be sorted and filtered by the user’s rating
* After a user has posted a comment or a rating, users may be update or delete their own comments or ratings at any point in time

**Messages:**

An in-app messaging service will be included to facilitate discussion between Patrons and Trainers in one place.

**Scope:**

* A direct message channel can be created between a patron or a user through a dedicated message tab
* Group chats may be created to add multiple people within a chat
* Users can send files
  + Able to configure valid file types
  + Able to configure valid file sizes
* Users can add calendar links to direct users to certain parts of a calendar for discussion
* Emoji integration will allow users to fully express their feelings within their messages

**Notifications:**

A filterable list for all users to be able to keep track of any plan changes or messages. The user can configure their notifications and contact methods in order to avoid spamming the user with unwanted information.

**Scope:**

**Autosave:**

Autosave will be important for Trainers who take time filling in event/plan information and unintentionally lose internet connection. This feature will allow Trainers to save time spent meticulously crafting plans for their Patrons. By saving each iteration with a time scope of 3 minutes, users will have an option to revert to a recent version of their page with the same information filled in.

**Scope:**

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# **Competitors**

TrainE will be a unique platform that has no direct competition on the current market. There are platforms that provide some similar features but do not fully encapsulate our offerings.

* **Acuity Online Appointment Scheduling[[1]](#footnote-0)**

Acuity is a service used to create a digital scheduling planner on a day to day basis. With a mobile and web view, clients are able to book appointments directly with people selling a service. The service acts as a middleman and provides tools for creating custom business profiles with appointment openings to advertise to clients interested in their service. With personalization in mind, TrainE primarily caters towards clients looking for a more personalized plan. By providing customizable templates for tracking the progress prepared for each client as well as integrating tools within the communication channel between the client and the Trainer, it creates a more specialized experience for clients.

* **Skillshare[[2]](#footnote-1)**

Skillshare is an online web service that allows users to expand their skill set through a predefined course that has been setup by instructors. Courses are a one time purchase and consist of videos and other information that are relevant for the course subject. Although the course materials can be changed by the instructor, once purchased, the course information is not tailored to each individual user and are general courses that are available to anyone who is interested in purchasing that course.

* **Yelp[[3]](#footnote-2)**

Yelp is a service for helping users find quality businesses of all sorts near them. The difference is that this is a typical step in finding a trainer, one which does not help facilitate long-term planning, communication, or scheduling. The purpose of TrainE is for it to be an all-in-one sort of service, which does facilitate what Yelp lacks, as they are traits that are more suited towards a trainer-patron relationship rather than something that would help for situations such as finding a good restaurant, which is what yelp is much more suited towards.

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# **Vision**

Although geared towards small-business owners and individual users in its current iteration, we hope to eventually expand our target market both nationally and globally. In order to prepare our application for such an expansion, we believe an increase in both resources and features will be required. It is to that goal that we plan to implement the following improvements listed below once a stable version of our app has been delivered.

**Upscaling:**

As our service continues to grow we anticipate making changes to accomodate an expanding user base. These changes include, but are not limited to, adding additional support for browsers beyond Google Chrome, a mobile user interface, and additional server allocations depending on the speed of growth. Once our base in California has been solidified, our resources and attention can be turned towards the national audience and international audience through software releases tailored to specific cultures and languages. A customer support page will be added to provide answers to common questions and direct further inquiries towards company contact details. Finally, as a way to curb unintended behavior by users abusing the app, an auto moderation service will be implemented alongside moderation tools.

**New features:**

As a company, we are not naive enough to believe that our platform in its current state will be a top competitor in the market on release. Innovation is a necessity and with that in mind we already have several features we would like to roll out as development continues.

**Payment System:**

Integration with a payment system would facilitate a more effective learning environment by incentivizing instructors to offer higher quality learning plans at a premium price. This will be facilitated with an integrated payment system using an online vendor.

**Scope:**

* Cart to hold learning plans before purchase
* Items can be removed from cart and multiple items held at a time
* Checkout to purchase items
  + Confirmation of learning plans in cart before checkout is required via message prompt
  + If a current learning plan the Patron is enrolled in conflicts with a checked out plan, the Patron will be notified and confirmation asked again.
* Identification information will be filled out before the customer is referred to a 3rd-party payment processor
  + Name, address, email address
  + Default values from information registered with the account will already be filled in
* Digital receipt will be sent to the email address associated with the user
  + Record of purchase will be stored server-side for 1 year before archiving

**Organization Accounts:**

Another account type aiming to serve organized groups of instructors will address a market currently filled by professional corporations. Registering as an organization would allow studios and schools to list multiple verified Trainers as their employees and assign Patrons who have signed up for the organization to specific Trainers.

**Scope:**

* Organization accounts function identically to a Trainer account but cannot upload learning plans
* Organization accounts can view all Patrons assigned to each Trainer account in its Organization
* Where a learning plan would be listed, Trainer profiles are shown
  + Trainer profiles will have featured learning plans displayed below their contact information, chosen by the Organization from the Trainer’s current plans
  + Prior to assigning a featured learning plan, the Trainer profile will display a blank learning plan
* An organization account can broadcast notifications to all Trainers assigned to themselves
* An Organization can assign a Trainer account to the Organization account pending approval with the Trainer account
* An Organization can remove a Trainer account from the Organization account without approval with the Trainer account

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# **References**

*Acuity scheduling - online appointment scheduling software*. Acuity Scheduling a Squarespace Company. (n.d.). Retrieved September 15, 2022, from https://acuityscheduling.com/

*Online learning: Creative classes on skillshare: Start for free*. Skillshare. (n.d.). Retrieved September 16, 2022, from https://www.skillshare.com/

*Restaurants, Dentists, Bars, Beauty Salons, Doctors - Yelp.* Yelp. (n.d.). Retrieved September 16, 2022, from https://www.yelp.com/

TODO:

* Footnotes for all references
* Expand upon product scope
* Features need more configurability
* Features need more “scalable” and “extensible” aspects
* Product vision features need to be of same quality as specific app features in terms of how fleshed out they are

MORE TODO (from email):

* You did not properly integrate the core components into your application. How will the core components relate to your system and how will it impact your system? For example, do all features be accessible to any user or only authenticated users?
* A few features do not have enough details to determine the scope of the feature such as the Rating System. This feature does not define the scale of the rating (e.g. 1-5, 1-10, etc.). Additionally, it does not elaborate if the rating can be removed, updated or flaged.
* The features described in the product vision will need to be flushed out as much as the features in the initial release. It is advised that the future features are feasible to your skill set and capacity.
* The course milestones and the product milestones are two different things. For the proposal timeline you need to concentrate on the product milestones. This includes next semester thus you will need to estimate any deliverables during that time.
* Both the project scope and product scope sections are regurgitation of what was provided during lecture, with little value added. It is never acceptable to just copy and paste content from the course to an assignment without adding relevant information or improving how the information is conveyed.

Vong example:VVVV

Feature: Upload a file

Scope:

• Able to configure valid file types

• Able to configure valid file size limit

• Uploader will have full access to all uploaded files

• Uploader can grant read or write access to any of the uploader's files to one or many users

• Uploader can remove read or write access to any of the uploader's files to one or many users

Implementation:

• User can upload multiple files at once

• Uploaders may enable auto retry upon failure

This is considered high complexity due to

1. the scope allows the application to both limit and expand its behavior in many ways (file type, file size and file access)

2. the developer implemented the feature in a scalable (multiple files) and extensible (auto retry) way.

1. Acuity scheduling - online appointment scheduling software. Acuity Scheduling a Squarespace Company. (n.d.). Retrieved September 15, 2022, from <https://acuityscheduling.com/> [↑](#footnote-ref-0)
2. Online learning: Creative classes on skillshare: Start for free. Skillshare. (n.d.). Retrieved September 16, 2022, from <https://www.skillshare.com/> [↑](#footnote-ref-1)
3. Restaurants, Dentists, Bars, Beauty Salons, Doctors - Yelp. Yelp. (n.d.). Retrieved September 16, 2022, from <https://www.yelp.com/> [↑](#footnote-ref-2)