
Software Requirements Specification

for

AFCEA Capstone Project

Version 1.5

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<April 2020>

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Revision History

Name	Date	Reason For Changes	Version
Document Creation	01/28/20	Created document	1.0
First Edits	01/28/20	Completed first round of the major sections	1.1
Added Content	01/29/20	Reviewed and added to remaining sections	1.2
WIX Platform	02/11/20	Changed information from wordpress to WIX	1.3
Professor Update	02/13/20	Corrected suggestions by Dr. Smith	1.4
Finalization	04/27/20	Final corrections and updates	1.5

1. Introduction

1.1 Purpose

The purpose of this document is to describe the intended features and limitations of the development of the AFCEA website. The objective of the project is to launch a more modern design, integrate key services and increase community engagement of the current system. This task will be accomplished through WIX framework for its simple migration, template design, customization and security. Hosting is provided by WIX and is already integrated with the website. The web application will feature upcoming events in the local community and provide more details about scholarship programs AFCEA endorses.

1.2 Document Conventions

Term	Definition
AFCEA/ organization	Non-profit membership association for military, government, industry, and academia as an ethical forum for advancing professional knowledge and relationships.
AHEF/ organization	AFCEA Hawaii Educational Foundation: a non-profit organization that supports Hawaii students and teachers by providing scholarships, grants, and awards.
System/ (New or Proposed) Website/ Project/ Product/ Application	The technology that is proposed by the client from AFCEA/AHEF and designed and implemented by the HPU students.
New/Casual User	A new user on the website that is not a member of the organization. The system's objective is to engage their attention and provide important information.
Member	A user that has become a member of the organization. The system's objective is to provide personalized service based on their role/needs in the organization.
Administrator/ Client	Individuals of AFCEA or AHEF that have a role in management within their organization and access rights to modify the content of the system. These individuals will provide insight on the general course of development.

Technician/ Client	Individuals of AFCEA or AHEF have a significant understanding of the system and can provide general or specific insight on the progress of development.
Developer	Students from HPU who are planning, designing and developing the proposed system in collaboration with the efforts of AFCEA and AHEF.

1.3 Intended Audience and Reading Suggestions

This document is created and maintained for the developers, administrators, and technicians as a means for documenting the specifications of the project and establishing a general understanding between all parties of the extent of the project to assure the quality and satisfaction in the final product.

A developer is expected to read this document thoroughly and to have a deep understanding of the expectations that are present. This is important for effective development and to produce a deliverable product within the significant time constraints of the project. Developers will be assigned specific features and general system requirements that they will develop and are expected to read and understand the respective sections within this document throughout the project cycle as a means to adapt to changes and communicate their perspective and understanding of the project to the client. The developer should also carefully read the first two sections of the document to understand the purpose and the values of the client and the organizations that they represent to achieve beyond the requirements that can be specifically written but to also solve the problem at its root to the best of their own abilities.

An administrator is expected to briefly cover the introduction section of this paper (Section 1) and to deeply cover the overall description (Section 2) and the system features (Section 4). It is important that the administrator's views of the project are well represented within this document and the features are properly prioritized to maximize the effectiveness of the product given the tight time constraints of the project.

A technician is expected to read this document thoroughly to assure the quality of the project. It is important to read the first two overview sections to compare the purpose and needs of the current system with the newly proposed concepts that will be developed into the new system. The project should be substantial enough to function stand-alone and replace core functions of the previous systems or at the very least have enough momentum to pursue further development within a wider time frame. General understanding and feasibility feedback are expected, based on the individual's experience with the current system, on the new system's functional, nonfunctional and environment/hardware requirements.

1.4 Product Scope

The product is intended to function as a subsystem relaunch of the current system that is maintained by AFCEA and it will be supported by the browser in a desktop and mobile environment. The product will seamlessly merge the key functions of the AFCEA Hawaii website (Link I) and AHEF website (Link II) into a single application. This is important for the user experience and the

administrative management as the information and respective workload will be contained within a single application of the system. Additionally, the system will integrate new services that are currently isolated from Eventbrite, Mailchimp, the central AFCEA website (Link III) and social media feed from Twitter, LinkedIn, Instagram, and Facebook. These new services will give users an in-depth feel of the AFCEA organization with listed upcoming events and a personal connection with the social media content. This should provide an incentive to promote community engagement and member registration.

1.5 References

Link I: <https://www.afcea-hawaii.org/>
Link II: <https://www.afceahieducationfoundation.org/>
Link III: <https://www.afcea.org>
Link IV: <https://www.afceahieducationfoundation.org/>

2. Overall Description

2.1 Product Perspective

The product will be constructed from the pre-existing systems that AFCEA is maintaining. The new web application will build on its current features. The product will become a subsystem of the platform that AFCEA is creating as it will integrate key services and social media feeds. The application can be accessed through any device with an internet connection. The web application provides community information about the organization, benefits, and events they sponsor. The website is designed to attract the viewer's attention to promote new AFCEA members. Increasing member engagement from the community will increase support for the organization, which in turn benefits the community as more opportunities become available for scholarships, grants, and events.

2.2 Product Functions

The product will carry out various functions depending on the various user's needs. The different pages on the website provide a variety of functions for the user to interact with AFCEA.

- *Homepage:* The top of the homepage displays an introductory video for new users to have a quick overview of the organization. Below the video there are snippets of young afcea, ahaf, and volunteer programs. The mouse moves over one of the snippets, there is a small description of individual sections. The snips are clickable and go to their respected pages. The page also gives a brief description about the organization and the donation page for the ahaf organization. Our events section displays the next four events that are upcoming. The social media section shows current posts from their different media platforms. The footer has a contact us section, social media links, and an email subscribe section.

- *About us:* The tab provides a breakdown for the leadership at AFCEA. The list provides the current foundation board and board directors members. The partnerships are also present and allow people to see the different organizations that they have worked with.
- *Capstone:* The page will be featured under the about us page as per request of the client. The page will have brief details about what capstone is meant to be. The page will highlight pictures of the group working together and giving a video presentation.
- *Donation:* The donation page provides users to have more information given as to why donate. The form on the bottom allows the one time donation and the form is sent to the cooperative email information the organization of their donation. Donations page will show the amount of money raised and how many organizations have donated in total. A detailed description of how the money is used is provided.
- *Events:* The events page gives the user a preview of the upcoming events that are occurring. The snippets provide the date and location of the event. Users can hit the register now button to RSVP to the event.
- *Young ACFEA:* The page gives a detailed description of what young ACFEA is and who they represent. The list of their core values is displayed for the user. An events section is on the left hand side so the users are able to be a part of the organization.
- *AHEF:* Allows users to see the education foundation and can see past events through the carousel of pictures. Scrolling down the about us sections provides more information on the impact they are trying to accomplish. Below the about us section their vision, mission, and values are displayed.
- *Volunteer:* Allow users to sign up to be volunteers at future events. The form is online so it allows quick and easy access.

2.3 Operating Environment

The proposed system is hosted on WIX which has provided hosting to a third party is not required. Additional environments will be used to support the main system such as Slack for discussions, Google Email for communication, Google Drive for documentation, LucidChart for diagram development and Pivotal Tracker for use case management.

2.4 Design and Implementation Constraints

The main constraint of this project is that its development is based on a previous system that has extensive features that need to be migrated to a new system that will not be maintained by the same developers that are designing and building the new system. Firstly, the current system consists of two websites that are developed on WordPress and minimizing the transition period must be considered. Therefore, building a website from scratch will not be feasible and the developers should take advantage of the migration capabilities of staying within WordPress. Secondly, the client requires the maintainability of the system after this project is complete after the initial scope of the project has been accomplished. This is important in that technical expertise may not be available as the development progresses on a volunteer basis with unknown experience of web frameworks. The concerns led to the migration onto the WIX since it is a template framework and there is no need of prior coding experience to use the developer tools. Wix also has a team of

support systems if any issues arise, the company is available to help with questions and provide advice.

2.5 User Documentation

1. <https://www.wix.com>

3. External Interface Requirements

3.1 User Interfaces

The logical characteristics of the interface will be template driven by the options available with WIX and it will be supported with custom HTML and CSS to create a local Hawaiian theme for community engagement.

3.2 Hardware Interfaces

All hardware interfaces are provided off the shelf, which includes the servers and databases that are accessed through BlueHost. An additional increase in hardware requirements will be resolved with an increase in payment with a 'pay for what is used' policy. The hardware interfaces are provided off the shelf, which includes the server and the databases provided by WIX. WIX provides hosting plans and it is self-contained.

3.3 Communications Interfaces

The protocol used will be HTTP and HTTPS. The Port number used will be 80 & 443 respectively. The website is compatible with any web browser and only requires an internet connection.

4. System Features

4.1 Login System

4.1.1 Description and Priority

The login allows the system to distinguish between new users, returning members and administrators from AFCEA and AHEF. This allows individuals to store personalized information and have special access to certain aspects of the website. They are given special privileges to add, remove, and update the content as they see fit.

4.1.2 Functional Requirements

The login system would require the website to be maintained by a group of administrators, the login page allows only specific individuals to overlook the contents of the website. The feature would remove the possibility of random individuals changing the contents. The content would be able to stay consistent with the organization's values and the message they want to project to the community. The risk would be high if a non-administrative member were to change the contents of the website.

4.2 Access Restriction System

4.2.1 Description and Priority

The access restriction system is an administrative tool to limit an individual's capabilities on the website based on their login account and granted administrative access. This is a critical priority of the project to be completed before administrative control is implemented into the system. There are certain data that are private and have a need to know basis to limit the risk of breaching the data. This includes a user's address, social security number, credit card information... etc. There are also control capabilities that allow the individual to modify public content of the website that should be restricted to leadership roles of AFCEA and AHEF that are liable and trusted to make such changes as it will affect the reputation and rights of their organizations. The benefit of this feature is that it will allow the website to handle sensitive information and easier manipulation of the content without manually re-coding the site. The risk is relatively high of legal and general security issues if this feature were to fail.

4.2.2 Functional Requirements

The access restriction system would allow the administrator to have access to several new pages and features to public pages. The new pages that the administrator would have access to include a scholarship page, donation page, volunteering page and social media page. The scholarship page will list scholarship applications that will include the applicant's personal information, scholarship name, any application information and any additional documents. The donation page will list information about completed donations, which includes the donor's names, donor's contact information, donation amount, and donation date. The volunteering page will list volunteer applications that will include the applicant's name, contact information and the completed forms. The social media page will allow the administrator to post new content and it will forward it to the selected social media platforms. The general pages will also have additional features that will allow the administrator to customize the page contents. The customizations will allow the administrator to create new event posts and edit text and images on the public pages.

4.3 Events System

4.3.1 Description and Priority

The event system will provide an interface for the administrators to notify general users about upcoming events. General users will also be engaged with the community by having the opportunity to provide interest and feedback. The general objective of the system is to increase user interest with the website and more importantly form a personal/social relationship with the organization. The intended impact of this subsystem to the rest of the website is to provide a dynamic feeling that

would renew the interest of our users so they may continuously return to the website for content they are interested in.

4.3.2 Functional Requirements

The administrator will have the capabilities to upload new events and provide a title, date, description and image. Users will have access to the content in several pages including the homepage, the events page, the young afcea and other pages depending on the relevance of the content. The engagement of the user with events will include likes, comments, and show interest.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The AFCEA website will require the high performance requirements including less media, images and videos. Therefore, the required resources are not a critical aspect of the website. The Homepage will be kept clean and organized so that the users can browse in a minimum time. Websites will utilize JPEG files instead of PNG files as the JPEG files are more web optimized than PNGs. JPEGs provide enough quality and usability. The website will also load the images faster since they will not have any texts placed in them. Texts are preferred more than the images so that the web browsing will get easier. The website will be made available to the public after it has been loaded to <https://www.wix.com/turbo/home> to check its optimization.

5.2 Security Requirements

Wix is managed by a team of experts and a team of dedicated developers who monitor Wix for security vulnerability and create updates or patches to keep it secure. As for web hosting, it is also managed by the hosting providers to tighten security and thwart any cyberattacks. Additionally, Wix will require the owner or the admin to keep Wix updated if there is an available update or patch.

Admin and users will also require to have a password and permission to be secured and not shared with other unauthorized personnel. Passwords will have special characters' requirements as well.

Lastly, it is also a good idea to back-up the WordPress website at least once or twice a week.

5.3 Business Rules

1. The website should provide an engaging modern environment for individuals interested in AFCEA Hawaii
2. Only authorized users are allowed to edit web pages.
3. When editing a web page, content must be simple for everyone to be able to edit and understand. In other words, content must be limited to templates for easy editing.
4. When saving edited pages, make sure not to override other people's work.
5. Homepage needs to be simple and easy to use as a user so that there is no confusion when navigating

- a. There are pictures with descriptions that allow the user to get a glimpse of the different ideas that AFCEA has to offer, if they want to click and view a page there is a link to the page.
6. The website should be able to connect users to scholarship opportunities, Donations, Volunteering, and to be a part of the AFCEA.

6. Other Requirements

Appendix B: Analysis Models

