

Project Plan/Proposal

Web Application Visualization/Graphics

Eva Muller

Abstract

These projects focus on researching and documenting web application visualization and graphics tactics and technologies, which will then be formed into different components of a personal portfolio website. The portfolio will be for potential employers, developers, and the general public to see my work and research in this field. The end deliverables will include a cover letter and resume (due October 16th), reports (due November 6th), and instructional content (due November 16th). The cover letter and resume will establish my credibility in the general field of web development, the reports will be based on research I conduct on select topics in this field, and the instructional content will include tutorials and tips on utilizing different technologies in web application graphics.

Statement of Qualifications

I am a fourth-year undergraduate Computer Science student at Michigan Technological University, with specific interests in Connected/Autonomous Car Technology and Mobile/Web Application Development. I am a member of the Humane Interface Design Enterprise at MTU, which focuses on software development and usability research. In this group, I am the Vice President and have led teams for a Voting Booth application, which allows university organizations to create and deploy surveys to be taken by students using RFID readers, and a project with General Dynamics Land Systems, developing tools for web scraping and convolutional neural networks. I've also had experience working as a Full-Stack Developer at 3M and an undergraduate research assistant, working on a faculty member's personal website. I've also worked on a 3D drone application that allows amateur drone pilots to view building inspection flight paths in a 3D, interactive environment taken by professional pilots.

Project Description

Introduction

For this project, I will be presenting my resume and cover letter to establish my credibility. I will also be presenting links and examples of my previous work. This includes class projects, internship work, and enterprise projects. A lot of these examples deal with web application visualization and graphics, and it's also pretty simple to present this work, since the end product is based around visual representation. To train others, I will provide tutorials on developing web application graphics using different technologies and libraries.

Project Statement and Scope

The mission of this project is to present a portfolio of work in Web/Mobile Application Development, focusing on visualization and graphic technologies/libraries. In doing so, this project can be used in the future to display some of my past work to potential employers and the general public in an informational and interactive environment. The portfolio will include various extraneous information regarding work not specifically in these fields, as well as some photography work (for personal interest).

Project Goal(s)

My project goals are to develop a personal portfolio website, improve my skills in website development, and explore new technologies for web graphics.

Project Objectives

1. Cover Letter/Resume: Make a generalized cover letter and improve current resume and incorporate into an interactive environment on the personal website portfolio.
2. Report: Create documentation on some specific research fields of interest including, UX/UI Design with 3D Environments, Embeddable Website Applications/Components, Graphic Performance/HPC, and Deploying Django Applications.
3. Instructional Unit: Create tutorials for the research topics and past project implementations.

Project Audience

The audience for these course projects are potential employers/scouters in the website development field, as well as the general public. The goal is to be able to showcase my work and research in website development with a focus on visualization and graphics to those who might be interested. This includes the general public/developers looking for inspiration or guidance/tutorials on these research topics and employers who want to gauge my abilities and experience with certain skills. The portfolio will be shared for public access and a link to the website will be shared as a key component to my applications and social media platforms. All projects on the portfolio will have similar access/sharing methods for the intended audiences.

Project Deliverables and Timeline

Project Plan (Stages) and Timeline

Due Dates:

Genre Project: Cover Letter and Resume due Oct 16, 2022

Genre Project: Reports due Nov 6, 2022

Genre Projects: Instructional Unit due Nov 20, 2022

Week	6	7	8	9	10	11	12
Cover Letter/Resume							
Report							
Instructional Unit							

Project Deliverables

What are your deliverables? (a cover letter, resume, report, and instructional unit)

- Cover Letter and Resume (Due Date: October 16)
- Report (Due Date: November 6)
- Instructional Unit (Due Date: November 20)

Evaluation and Feedback Cycle

I will generally start each project after the one before it is done. In some cases, I might find it necessary to overlap the instructional content with generating the reports, as those can go hand-in-hand. The goal is to create reports on my research findings with web development and, from those, create tutorials on how to best use those technologies. With feedback, I'll take a day or two to correct any issues with my current and past project segments.

Support Documentation and External Resources

Spotify Careers: <https://www.lifeatspotify.com/>

This is a company that I am interested in applying to for a full-time position after graduation.

WebGL: https://www.khronos.org/webgl/wiki/Main_Page

This is WebGL's main wiki page. It is a very common API for web graphics.

Additional Considerations

None