

# **Software Project Management Plan**

**Project Name**

**September 13, 2022**

**MAAKDE**

**Computer Science Dept / CSUN**

**Professor Dantes**

# Revisions

Version	Primary Author	Description of Version	Date completed
1.0	MAAKDE	Initial documentation	10 - 02
1.1			
1.2			
1.3			
1.4			
1.5			

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# Introduction

## 1.1 Project Overview

### **Purpose**

Develop a website that gives recommendations to users about their clothing fashion and apparel. The clothing recommendations would also give users a list of retailers to find the most affordable options.

### **Scope**

This application will be for users 13+ and older. We plan to have this application working as a website before potentially moving to Android and iOS.

### **Assumptions and Constraints**

We will assume that each of the users will be using up-to-date browsers (listed below) and have a stable internet connection. Some of the browsers we are expecting to encounter include:

- Chrome
- Firefox
- Safari
- Microsoft Edge
- Opera

## 1.2 Literature Review

For this project, our main goal was to find a method of programming where we would be able to easily connect our frontend and backend programs to each other with ease. In order to do this we began doing research on different methods of doing so, one of the methods we decided to use was to study a method done by youtuber Nicholas Renotte. Also, the Backend team, which consists of Deni, Erik and Kennedy began to go more in depth with using image recognition with Tensorflow.js, which we feel would be extremely beneficial with connecting with our front end team and the overall functionality of the program in general. We also have been researching javascript more generally and many react concepts to integrate to our UI and backend. We were also considering making a REST API or using GraphQL to send requests from the client to the server and vice versa. For example, users on the front end would take a picture of their shirt, then our API will send an HTTP request to our machine learning program. Next, the machine learning program will compile recommendations based on the color theory/style/fit of the clothing and send a response back to the front-end. The Frontend team consisting Matthew, Andres and Aaron have also started looking into style guides, color combinations, and color theory to help pinpoint what information was needed and which methods of understanding we need to implement to the AI/ML aspect of our program and assist Backend. Determining a basic color baseline for the image recognition model will be vital to allowing our program at the bare minimum color match clothing color based off of numerous color elements. Hopefully after we can get the program to somewhat operate based off of the baseline colors/matching then we can dive deeper into teaching the program to determine different shades and correlate it to the standard set color. (IE Deep Blue, Azul, Ultramarine = Standard Blue).

# Project Organization

## 2.1 Roles and Responsibilities

Team Member	Role	Email
<b>Kennedy Johnson</b>	Project Manager, Backend Developer, Full Stack Developer	kennedy.johnson.021@my.csun.edu
<b>Deni Cabaravdic</b>	Backend Developer, Full Stack Developer	deni.cabaravdic.927@my.csun.edu
<b>Aaron Gian Madrid</b>	Frontend Developer, Full Stack Developer	aarongian.madrid.991@my.csun.edu
<b>Erik Vardumyan</b>	Backend Developer, Full Stack Developer	erik.vardumyan.184@my.csun.edu
<b>Matthew Kim</b>	Frontend Developer, Full Stack Developer	matthew.kim.733@my.csun.edu
<b>Andres Macias</b>	Frontend Developer, Full Stack Developer	andres.macias.857@my.csun.edu

Role	Responsibility
Project Manager	Planning, scheduling, scheduling, and execution, delivery of the software and project
Backend Developer	Create the components and features on the server side that the user can indirectly access through the front end.
Frontend Developer	Develops Client Side website/web-app that allows the user to see and interact with the program. Creates interaction with back end models and outputs results as well as an interactive display.
Full Stack Developer	Develop API's to assist with client-server architecture and work on the machine learning model while building the user interface

## 2.2 Tools and Techniques

*Provide your tools and techniques that you will be using to develop your project. Bullet points are fine, just be descriptive as to what you are using it for*

- **Github:** A cloud-based website used to help developers manage their code as well as track changes.
- **Jira:** Software that allows users to plan, track, and manage our software development.
- **Discord:** A free platform that gives the team the ability to communicate with voice calls, video calls and private chats.
- **Visual Studio Code:** Source-code editor that includes features such as; debugging, code refactoring, intelligence code completion, etc
- **VScode - LiveShare:** Software that allows our team to collaborate on the code without the need to sync code or configure the same settings or environment.
- **Tensorflow:** An end-to-end machine learning platform that allows developers to create dataflow graphs.
- **React.js:** Javascript library to make developing web applications more efficient.
- **Node.js:** Javascript runtime environment that allows us to execute programs outside of a web browser.
- **SQL:** Database
- **Google Drive:** A cloud-based storage which allows users to save their files online
- **Waterfall Style Development:** A sequential development process that flows like a 'waterfall' and goes through all phases of the project.
- **Tailwind/Bootstrap:** CSS frameworks to make our front-end components beautiful.
- **UML Diagram:** UML which stands for Unified Modeling Language, which helps extend the UML specifications to cover a wider portion of software development efforts.

# Project Management Plan

## 3.1 Tasks

Task/Phase #	Task Description	Date
Task 1	Brainstorming Project	9-02-2022
Task 2	Discussion of Project Ideas	9-08-2022
Task 3	Selection of Project Idea	9-08-2022
Task 4	Researching technologies to incorporate in our software	9-08-2022
Task 5	Understand how Jupyter/Python will work with the frontend softwares we have chosen (React/Javascript)	9-15-2022
Task 6	Develop and practice programming skills with our technologies	9-15-2022
Task 7	Research on ML methods to connect frontend to backend	9-15-2022
Task 8	Start Discussion on design/UI of the software	9-15-2022
Task 9	Research practical guidance to Color Theory, Combinations and Mixing	9-22-2022
Task 10	Looking up documentation and researching Image recognition model techniques	9-22-2022
Task 11	Looking up best technology to form a database on like SQL	9-22-2022
Task 12	Researched CSS and front end libraries	10-1-2022
Task 13	Started documentation for the SRS documentation	9-29-2022
Task 14		
Task 15		
Task 16		
Task 17		
Task 18		
Task 19		
Task 20		
Task 21		

## 3.2 Assignments

Week #	Deliverables/Progress
2	Progress Report #1
5	Software Project Management Plan
6	Progress Report #3
7	Software Requirement Spec
8	Progress Report #4
10	Progress Report #5
11	Software Design Document
12	Progress Report #6
12	SDD
13	Peer Review #2 (Code Review)
14	Progress Report #7
15	Software Test Plan
15	Progress Report #8
16	Research Paper (Individual) Due



## Project 490 Gantt Chart

PROJECT TITLE		Fashion Designer App	COMPANY NAME		MAAKDE
PROJECT MANAGER		Kennedy Johnson	DATE		9/19/22

WBS Number	Task Title	Task Owner	Start Date	Due Date	Duration	Pct of Task Complete	Phase One																			
							Week 2					Week 3					Week 4					Week 5				
							M	T	W	R	F	M	T	W	R	F	M	T	W	T	F	M	T	W	R	F
1	Project Requirements																									
1.1	Brainstorming	MAAKDE	9/2/22	9/9/22	7	100%																				
1.1.1	Discussion of Project Ideas	MAAKDE	9/8/22	9/9/22	2	100%																				
1.1.2	Selection of Project Idea	MAAKDE	9/8/22	9/9/22	2	100%																				
1.2	Review Syntax of Jupyter / Python / Javascript	MAAKDE	9/15/22	9/22/22	7	100%																				
1.3	Researching ML w/ frontend methods	MAAKDE	9/15/22	9/22/22	7	90%																				
1.4	Discuss design/UI	MAAKDE	9/15/22	9/22/22	7	35%																				
1.5.1	Research color theory, combinations and mixing	MAAKDE	9/22/22	10/6/22	14	95%																				
1.5.2	Research Documentation on Image Recognition Model Techniques	MAAKDE	9/22/22	10/6/22	14	65%																				
1.6.1	Research Best SQL Method	MAAKDE	9/22/22	10/6/22	14	65%																				
1.6.2	Research Front End Libraries/CSS	MAAKDE	10/1/22	10/6/22	5	15%																				
2	Project Design (Designing)																									
3	Project Implementation (Coding)																									
4	Project Verification/Testing																									

[illegible]



# Additional Material

## Definitions, Acronyms and Abbreviations

**WATERFALL** - An approach to software development that emphasizes ...

**WF** - WaterFall

**JS** - Javascript

**IDE** - Integrated Development Environment

**AI** - Artificial Intelligence

**ML** - Machine Learning

**FE** - Frontend

**BE** - Backend

## References

### Basic Information

- <https://www.youtube.com/watch?v=RGOj5yH7evk>
- <https://basilebong.com/blog/image-recognition-with-tensorflow-js-1m74>
- <https://postindustria.com/ai-clothing-detection-use-cases-for-fashion-and-e-commerce/>
- <https://towardsdatascience.com/clothes-classification-with-the-deepfashion-dataset-and-fast-ai-1e174cbf0cdc>
- <https://medium.com/axinc-ai/clothingdetection-a-machine-learning-model-for-detecting-clothing-dab99e1492eb>
- <https://postindustria.com/ai-clothing-detection-use-cases-for-fashion-and-e-commerce/>
- <https://www.folio3.ai/blog/clothing-detection-ai-machine-learning/>

### Color Theory / Style Guide

- <https://www.sunglasswarehouse.com/blog/sunglasses-for-face-shape/>
- <https://www.abrask.com/how-to-choose-jewelry-based-on-your-skin-tone-the-entire-guide/>
- <https://youtu.be/cuhFHTX1wcY>
- <https://looksgud.com/blog/formal-casual-shirt-pant-trouser-color-combinations-for-men/>