



ClueLess Closet

Project 1

ATLS 4519: How to Hack (Almost) Anything
Fall 2025

Group Project with
Brett Rabbiner and
Elizabeth
Saunders

DIRECTIONS PER PROF RYO SUZUKI

You can hack whatever you want. There are no specific requirements regarding the topic, technology, or tools—you can literally hack and present anything you like. The topic and theme are entirely open-ended. Of course, you can leverage tools or expertise not covered in class. For example, if you have experience in mechanical design, robotics, or digital fabrication, feel free to use those skills. If you're familiar with other tools, technologies, or programming languages, go ahead and incorporate them. If you're passionate about your own research topic, try to integrate it into your project. We will focus on what you make rather than how you make it. Preferably, I would like to see you apply at least one tool, technique, or skill learned in class, but you are not restricted to the only techniques we have covered. Any crazy, mind-blowing, out-of-the-box hacks are highly encouraged.

Team: You can form a team of up to 4 people. If you prefer, you can also work on the project individually.

Demo Day: Please try to prepare for 15 minutes demo presentation for each group.

Submission Deadline: 10/7 (Tue) by 11:59 PM (Midnight of Demo Day) Please submit the project on Canvas. Each group member can submit the same deliverables.

Deliverables:

1. Writing (PDF)

You can use any format (Google Docs, Notion, LaTeX, Word, etc.), but the final submission must be a PDF. The writing should include

- Title and Authors
- Introduction (Motivation, Describe what you build, Use figures or visuals effectively)
- Related Work (Provide some related products, examples, etc that you refer to or get inspiration from - If applicable, include research papers as references)
- Implementation (Describe how you build, Design process and ideation, Please use figures like sketches, system diagrams, or screenshots effectively, The writing should be detailed enough for someone to replicate your system, GitHub link is welcome, but the writing itself should be self-explanatory)
- Future Work [Describe how you would expand the project (if you had more time)]

2. Video (MP4 or MOV) Please submit a demo video. Video editing is not required, but highly encouraged. This is not because of the class, but creating a polished video could benefit you in the future (e.g., for your portfolio or job applications). There is no specific requirement for the video length, but I expect more than 1 minute.

3. Presentation Slides (PDF) As this is a Demo Day, please prepare slides for your presentation. You can use any presentation format and reuse content from your written report. Submit the slides you used during Demo Day.

RUBRIC

Grading and Evaluation (35 points = 35%) The evaluation will generally follow these criteria:

Quality of the Demo and Idea (15/35 points)

- Is the demo exciting, impressive, engaging?
- Is the idea novel and original?
- Is the idea unique, or has it been done before?
- How impressed is the audience (other students)?
- If the demo is mind-blowing, that's a huge plus. For example, if the reaction is like "Oh my god! Wow, I've never seen this before! That's so cool!", then it easily gets the perfect score.

Technical Implementation (10/35 points)

- How technically complex or challenging is the project?
- How difficult was it to build the app/game?
- While we mainly evaluate "what you made," we will also consider the technical aspects.

Presentation Clarity and Quality (10/35 points)

- How clearly you communicate the motivation, problems, solutions, system description, and application scenarios
- The visual quality of figures and videos
- Does the video, figures, and text convey the idea effectively?
- Does the audience's reaction reflect the novelty and clarity of the presentation?

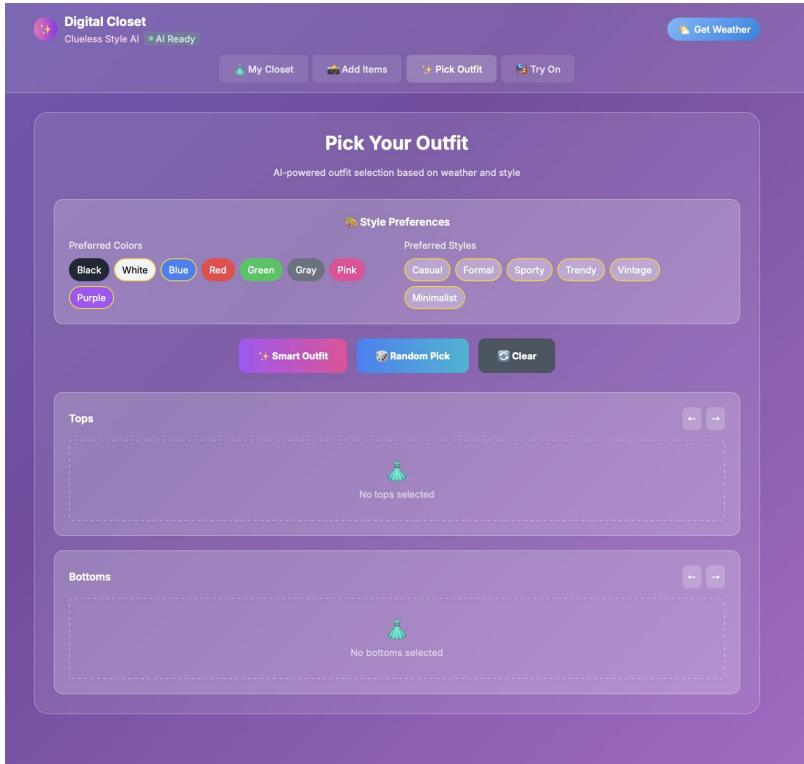
Motivation



Cher's closet from *Clueless* (1995)

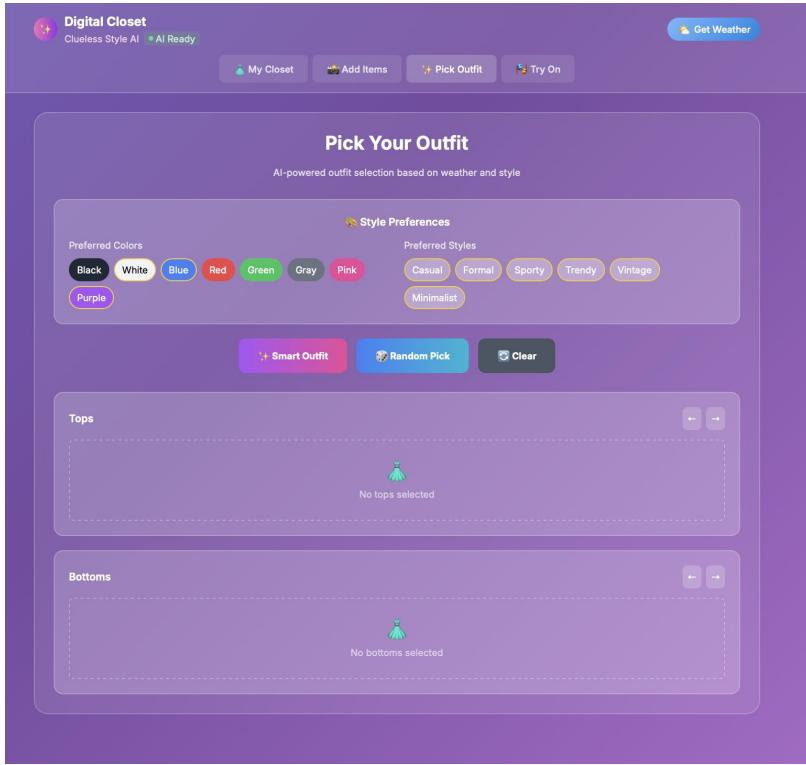
Description of What We Built

This is a web application that recreates the iconic computerized closet from the movie "Clueless," where you can digitally organize your wardrobe and get AI-powered outfit suggestions.



Digital Closet HTML site

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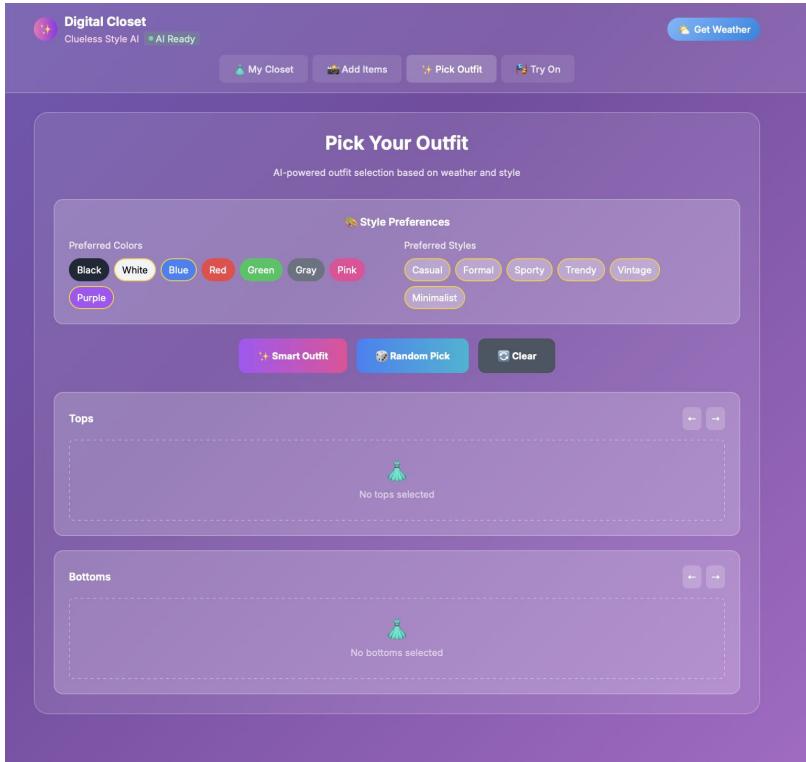
Core Functionality

1. AI Clothing Classification
2. Smart Outfit Generation
3. Weather Integration
4. Closet Management

Technical Architecture

Privacy-Focused

Description of What We Built



This is a web application that recreates the iconic computerized closet from the movie "Clueless," where you can digitally organize your wardrobe and get AI-powered outfit suggestions.

Core Functionality

1. AI Clothing Classification

- Uses TensorFlow.js and Teachable Machine models to automatically identify clothing items from photos
- Two AI models work together:
 - **Item Model:** Recognizes clothing types (shirts, pants, dresses, jackets, etc.)
 - **Style Model:** Determines fashion categories (casual, formal, athletic, etc.)

2. Smart Outfit Generation

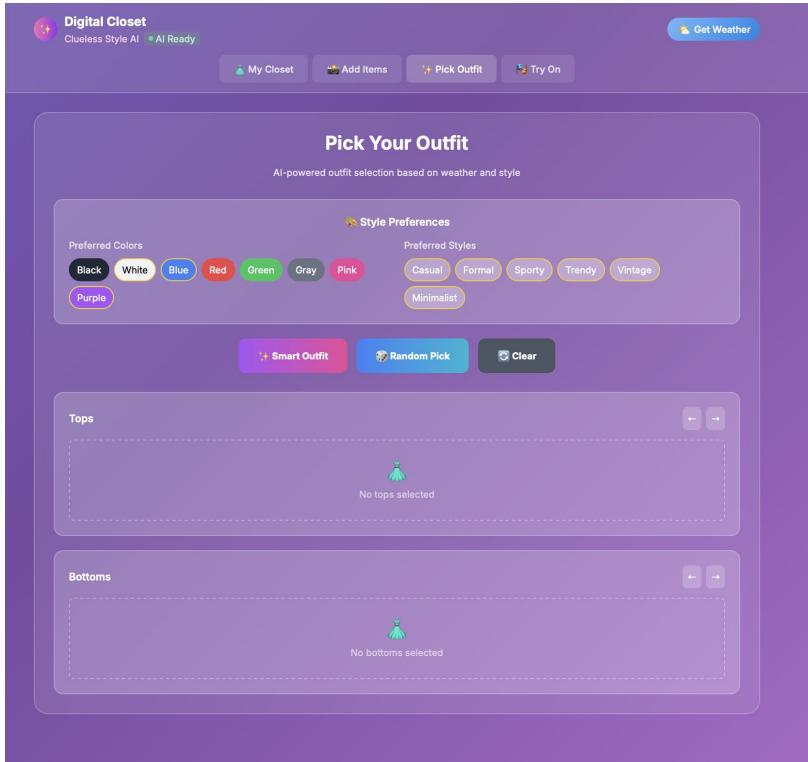
3. Weather Integration

4. Closet Management

Technical Architecture

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Description of What We Built



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Core Functionality

1. AI Clothing Classification

2. Smart Outfit Generation

- Creates outfit combinations from your closet items
- Factors in real-time weather data to suggest appropriate clothing
- Offers both AI-powered "smart" outfits and random combinations
- Calculates compatibility scores for outfit suggestion.

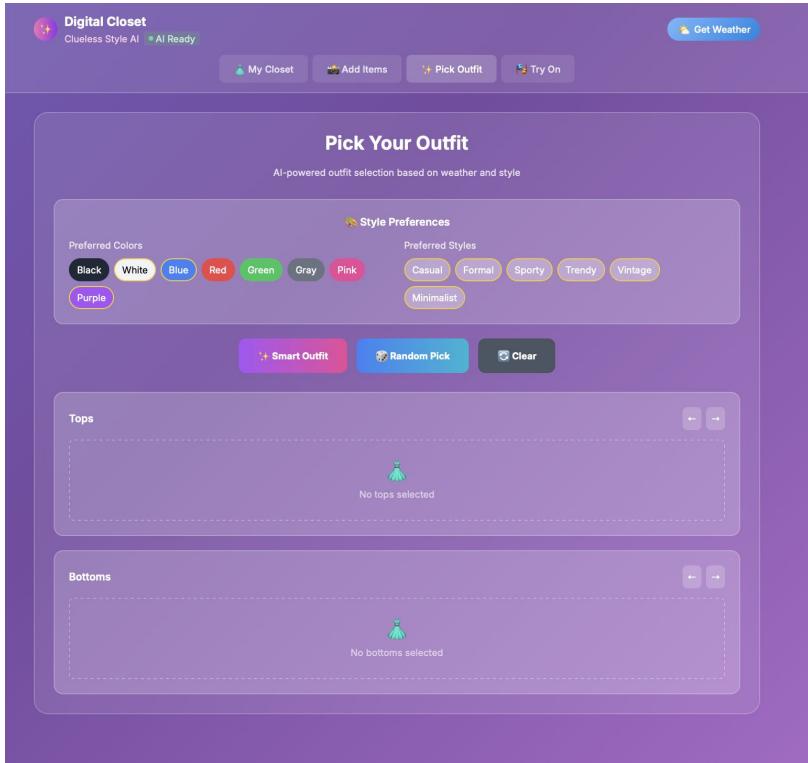
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Core Functionality

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2. Smart Outfit Generation
3. Weather Integration

- Uses your browser's geolocation to get current weather conditions
- Adjusts recommendations based on temperature (suggests layers when cold, lighter clothes when warm)
- Handles both Fahrenheit (US) and Celsius (international) automatically

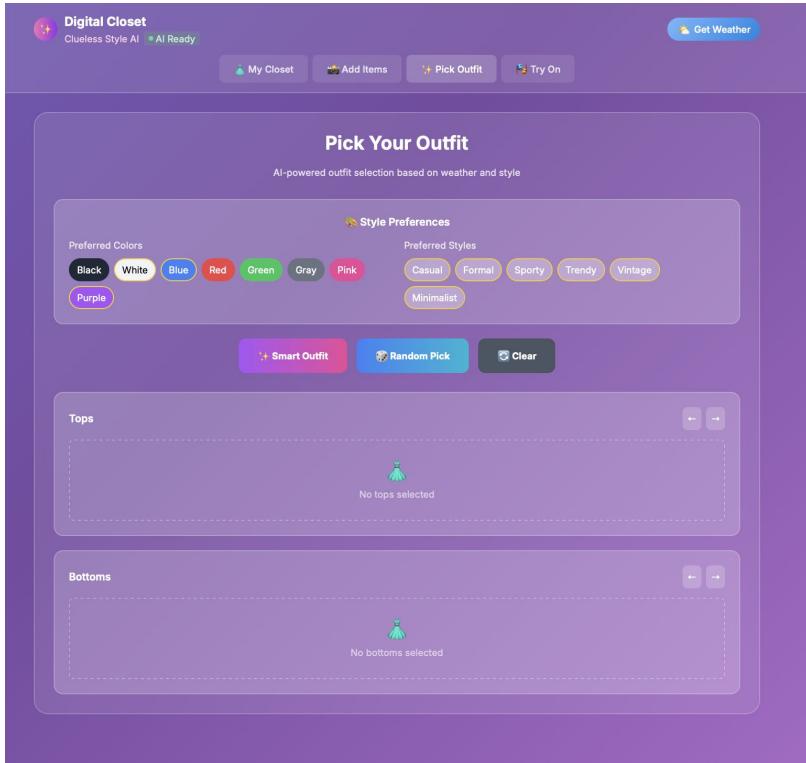
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Privacy-Focused

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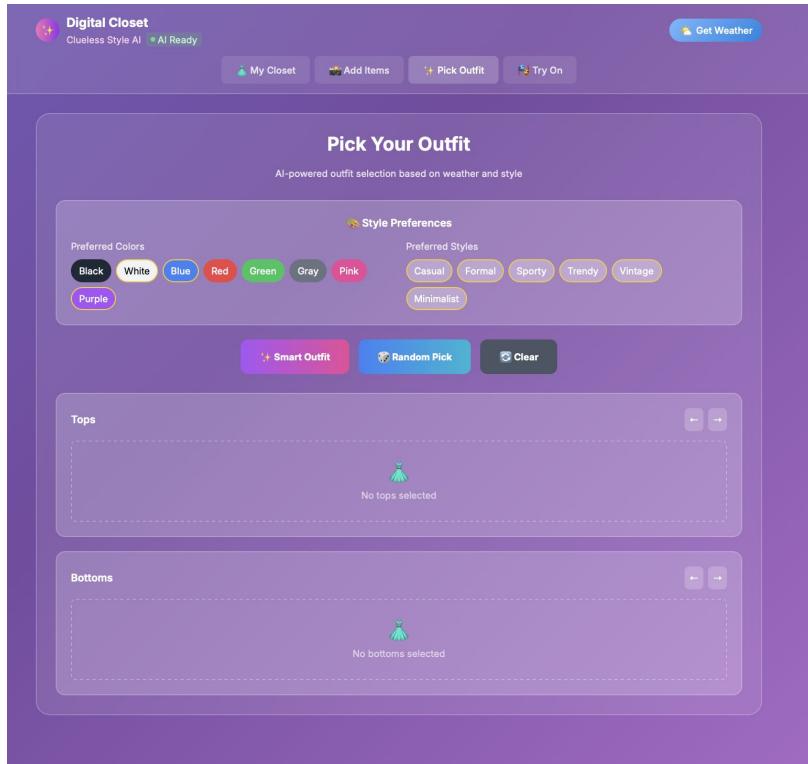
4. Closet Management

- Upload multiple clothing images at once with batch processing
- View, edit, and organize all your items by category
- Remove items you no longer need
- All data stored locally in your browser (nothing sent to external servers)

Technical Architecture

Privacy-Focused

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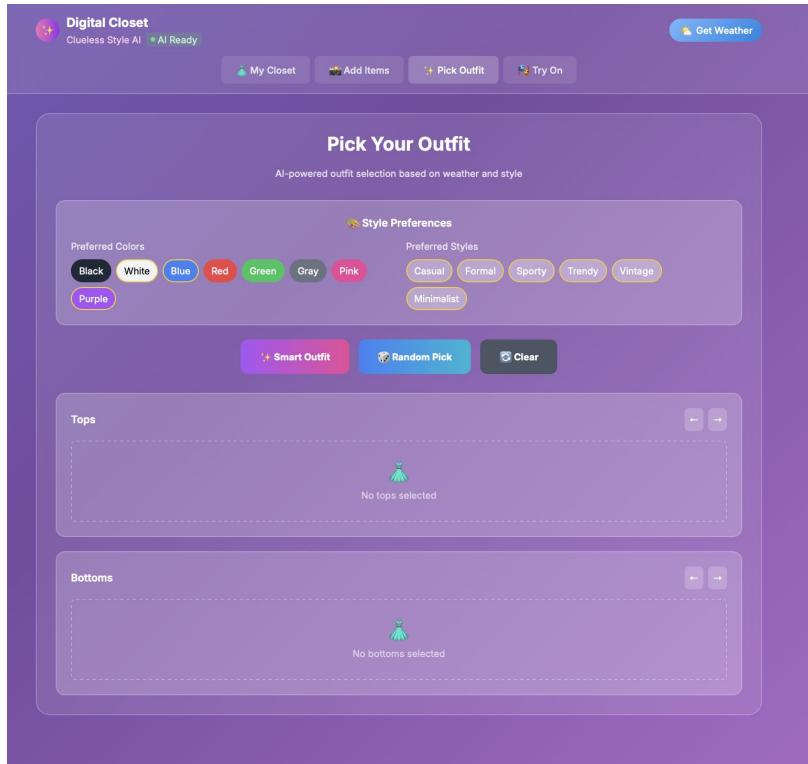
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Technical Architecture

- Built with vanilla JavaScript (no frameworks) and organized into modular files:
- **Image processing** with automatic compression to fit browser storage limits
- **Canvas API** for efficient image manipulation
- **localStorage** for data persistence (stores 50-100+ items)
- **Beautiful glassmorphism UI** with TailwindCSS and custom animations
- **Experimental AR try-on feature** using MediaPipe for pose detection

Privacy-Focused

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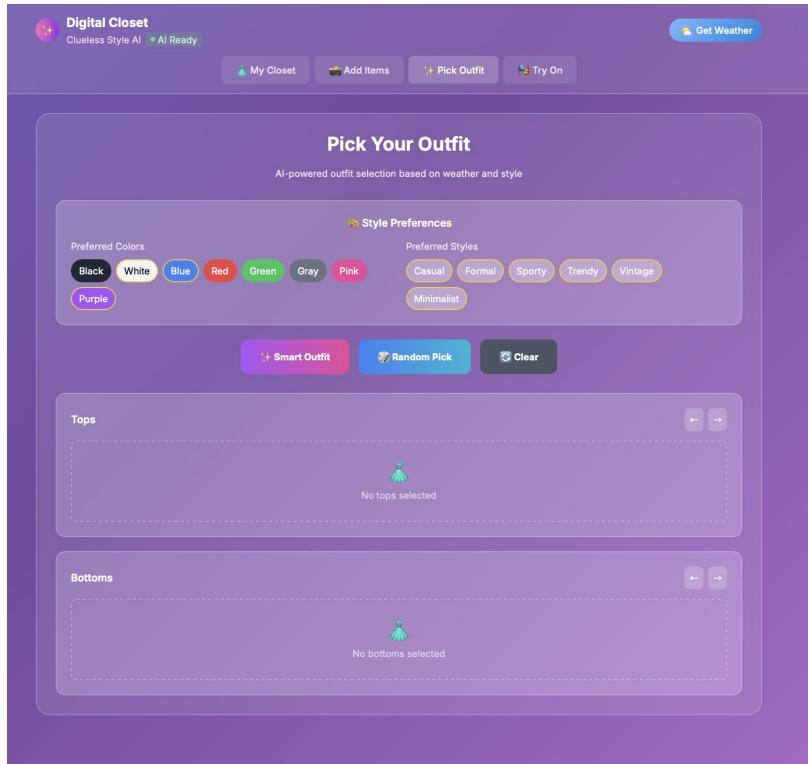
Privacy-Focused

Everything runs in your browser - your clothing photos and data never leave your device except for anonymous weather API requests using just your coordinates.

It's essentially a fun, nostalgic project that combines AI, fashion, and 90s movie culture into a practical wardrobe organization tool!

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Technical Architecture

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It's essentially a fun, nostalgic project that combines AI, fashion, and 90s movie culture into a practical wardrobe organization tool!

Digital Closet HTML site

Inspiration

Elizabeth's Final Project for Creative Technology with Zack Weaver-Jacobson (Spring '25)

Project Overview:

- A closet-installed RFID tracking system that monitors your clothing inventory in real-time
- Uses sensors to detect which items are present or worn
- Generates outfit recommendations based on weather api and clothing database recommendation



Purpose:

Helps optimize your wardrobe by identifying which pieces you actually wear versus those taking up space, enabling more informed decisions about what to keep or donate. It's essentially a data-driven approach to the "if you haven't worn it in a year, get rid of it" rule, but with personalized outfit suggestions built in!

Key Features:

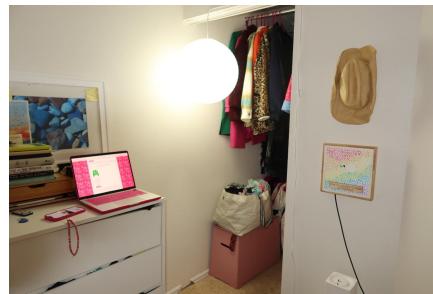
- Tracks wear frequency for each garment
- Considers outfit compatibility and styling combinations
- Integrates weather data to suggest appropriate clothing
- Displays recommendations on a dedicated HTML website
- Collects long-term data to identify underutilized items

Inspiration

Elizabeth's Final Project for Creative Technology with Zack Weaver-Jacobson (Spring '25)

Project Overview:

- A closet-installed RFID tracking system that monitors your clothing inventory in real-time
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The project works **great as a means to collect physical data** to track what I am wearing vs. not while also **suggesting which outfits to wear** based on weather and stylistic combination.

However, the project is **bulky to update the database of clothing items**. The next phase of this project is to make creating the digital closet more streamlined and easier.

Categories

Tops

- Long Sleeve Shirt
- Short Sleeve Shirt
- Tank Top

Bottoms

- Pants
- Mid-Length Shorts
- Shorts

Dress

- Long Dress
- Mid-Length Dress
- Short Dress

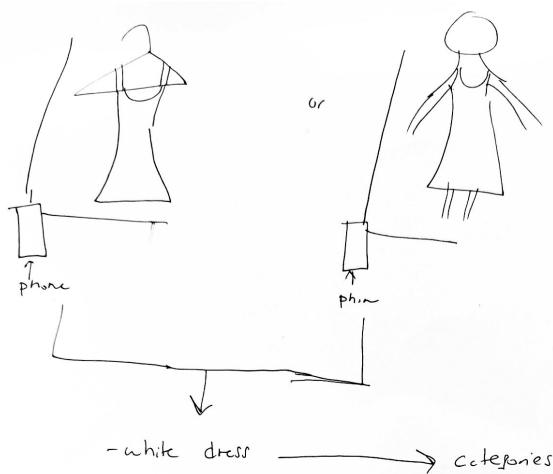
Outer Wear

- Sjacket
- Sweater
- Coat

Shoes

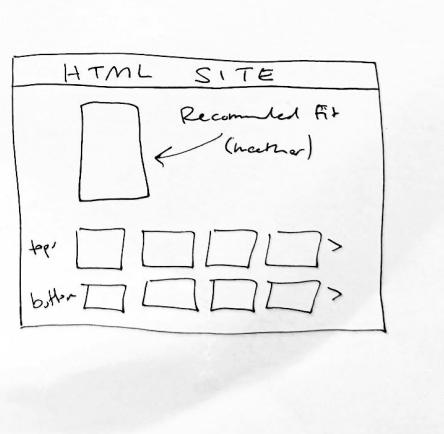
- Bags
- Shoes
- Sunglasses

Process



Name:	<input type="text"/>
color:	white
cатегори:	dress
fabric:	cotton
brand:	<input type="text"/>
size:	<input type="text"/>
<input type="button" value="SUBMIT"/>	

*use manual field entry if item not classified



How:

★ Mediapipe = Image Segmentation for HTML site

★ Google Teachable Machine = Classification of Categories

Reach Goal

Reach Goal:

- Size
- Brand

Text Recognition

- #1: Use Mediapipe + OCR
- #2: Use GPT Vision API for Label Reading
(might be more accurate for this than OCR)

Logo Recognition

- #1: Train Teachable Machine for Logo recognition
- #2: Use YOLO for image recognition

Division of Work

Brett Rabbiner

Responsible for software development, UX/UI, and project's AR capabilities

Motivation: Use and test the AR that we learned in class for this project

Elizabeth Saunders

Responsible for creating the machine learning models and documentation

Motivation: easier categorization of clothing items in OG ClueLess Closet

Design Process

Design Process

Elizabeth trains the
machine learning model

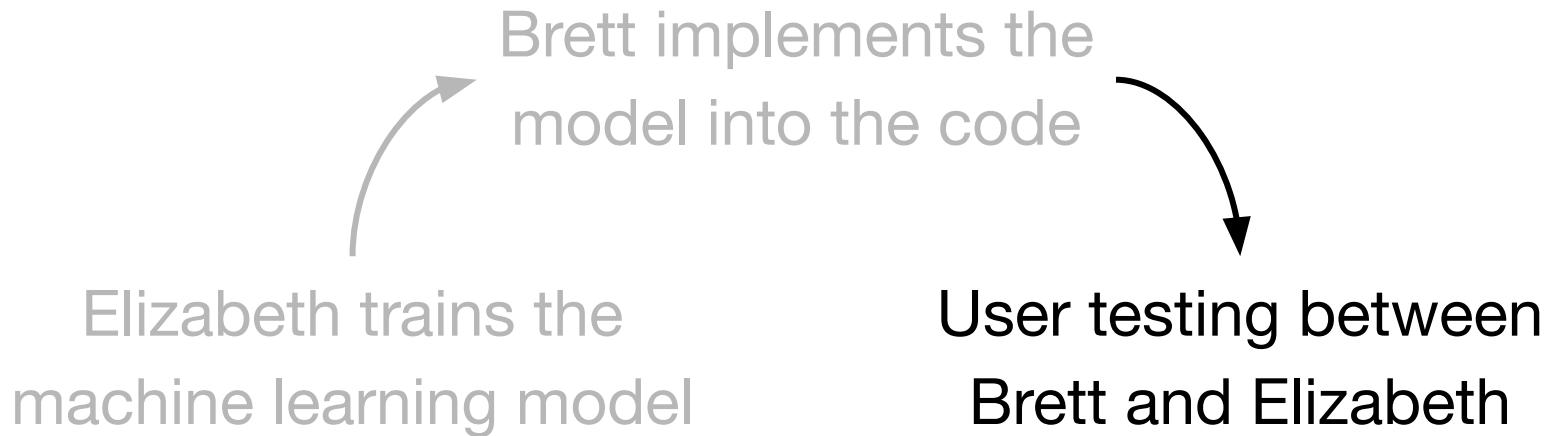
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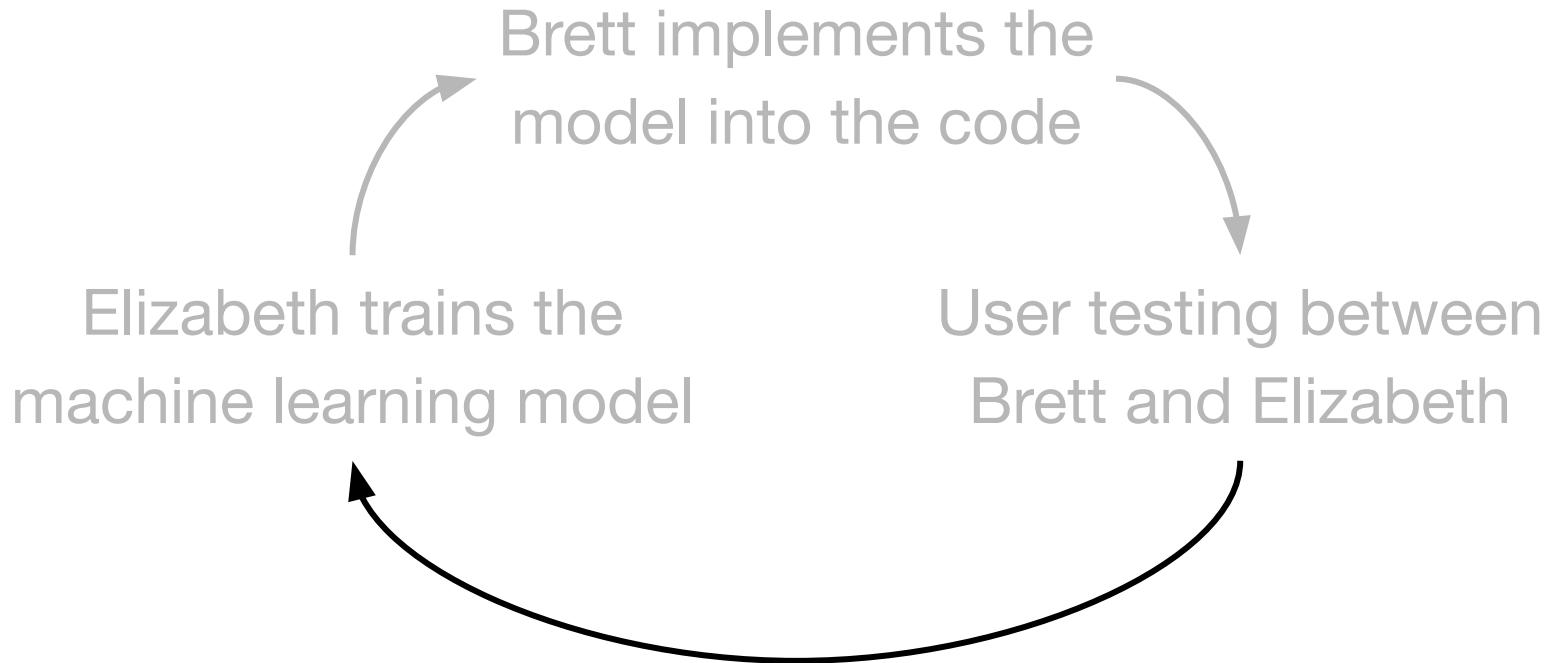


Brett implements the
model into the code

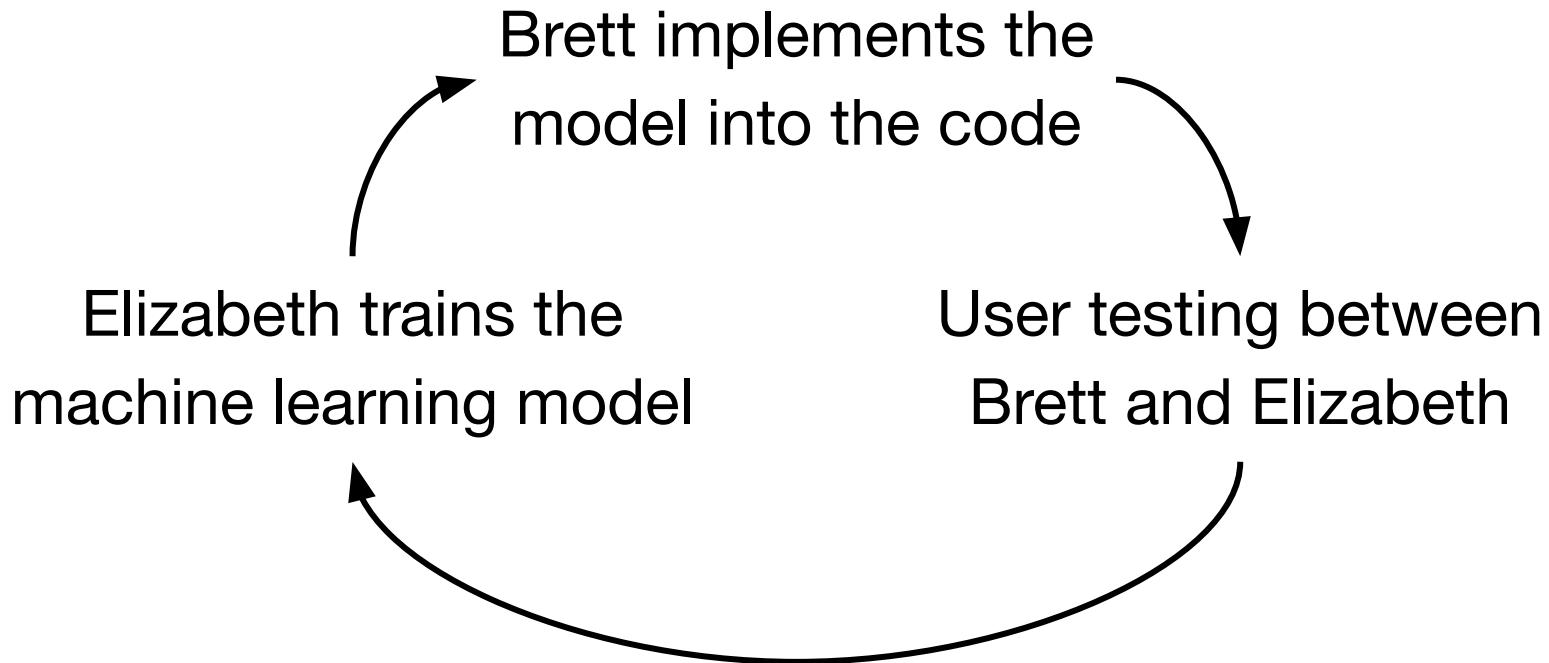
Design Process



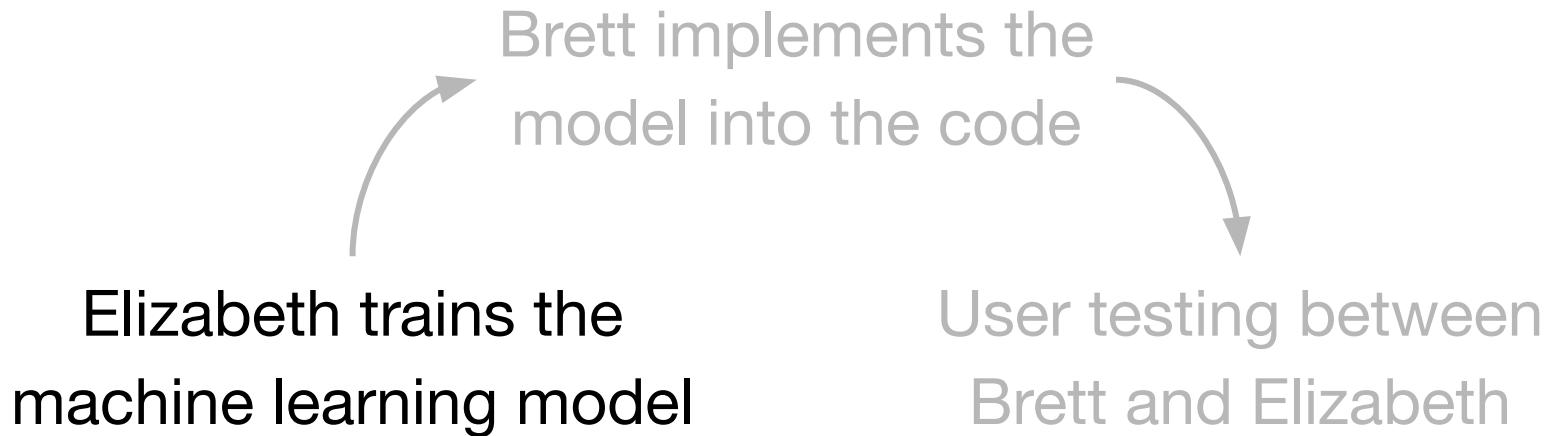
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Design Process



Creating the Google Teachable Machine to Identify Clothing

In teachable machine only one thing can be true at once, therefore we need two teachable machine models for this project

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In teachable machine only one thing can be true at once, therefore we need two teachable machine models for this project

#1

Determining Article of Clothing

Long Sleeve Shirt, Short Sleeve Shirt, Tank, Shorts, Pants, Long Skirt, Short Skirt, Short Dress, Long Dress, Sweater, or Coat

Creating the Google Teachable Machine to Identify Clothing

In teachable machine only one thing can be true at once, therefore we need two teachable machine models for this project

#1

Determining Article of Clothing

Long Sleeve Shirt, Short Sleeve Shirt, Tank, Shorts, Pants, Long Skirt, Short Skirt, Short Dress, Long Dress, Sweater, or Coat

#2

Determining Category Of Clothing

Athletic, Casual, Formal, Minimalist, or Vintage

Creating the Google Teachable Machine to Identify Clothing

Pulling photos from:



Elizabeth's Closet



Poshmark Screenshots



Online Photos
(stock images and online stores)

Both teachable machine models pulled together over 2,000 unique photos.

Creating the Google Teachable Machine to Identify Clothing (1 of 2)

Separating clothing picture data into **article of clothing** groups (with size of group)



- Long Sleeve Shirt (231)
- Short Sleeve Shirt (246)
- Tank (192)
- Shorts (188)
- Pants (248)
- Long Skirt (208)
- Short Skirt (36)
- Short Dress (234)
- Long Dress (227)
- Sweater (115)
- Coat (28)
- Bag (42)
- Shoes (21)
- Glasses (29)

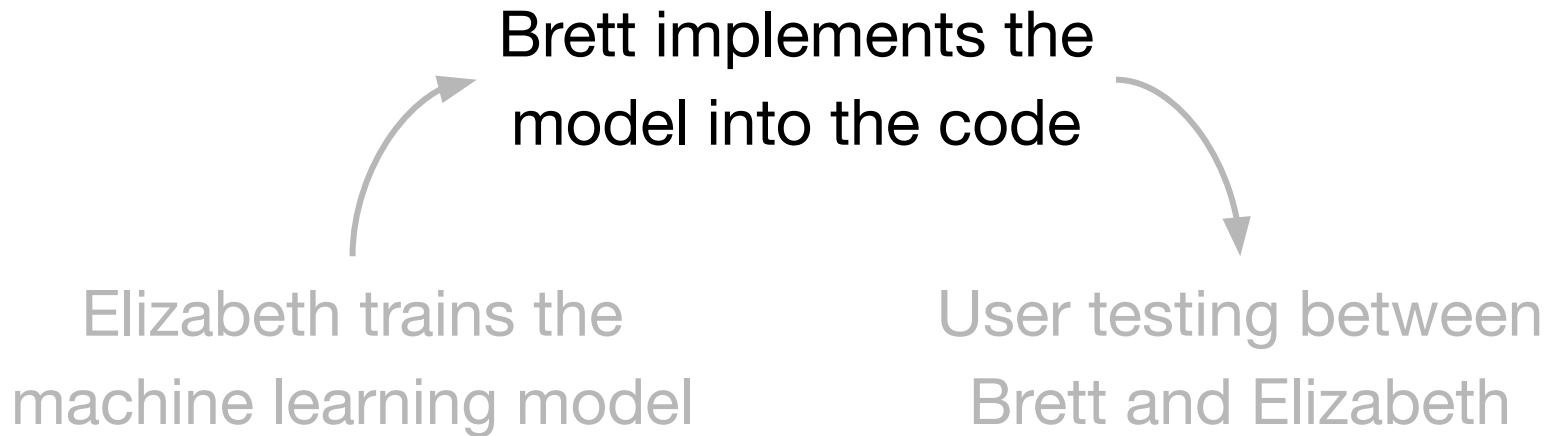
Creating the Google Teachable Machine to Identify Clothing (2 of 2)

Separating clothing picture data into **category** groups (with size of group)



Athletic (3)
Casual (438)
Formal (239)
Minimalist (231)
Trendy (263)
Vintage (10)

Design Process



Creating the HTML site to host the Teachable Machine Model and Virtual Try-On (Simplified)

Feature:	Method:
Weather Recommendations	Weather API integration
AI Clothing Classification	Teachable Machine Model Integration
Image Upload	FileReader API + Canvas Compression
Closet Storage	LocalStorage Persistence
Outfit Generation	Smart Matching Algorithm
User Interface	TailwindCSS + Custom Glassmorphism CSS
Virtual Try-On (Experimental)	MediaPipe Pose Detection
Data Management/Category Filtering	JavaScript Array Filter Method
Item Management (Edit/Delete)	CRUD Operations with LocalStorage
Responsive Design	Mobile-First CSS Media Queries

- 1. AI Classification Function**
- 2. Weather Recommendation Function**
- 3. Image Upload Function**
- 4. Closet Management Function**
- 5. Outfit Generation Function**
- 6. User Interface Function**
- 7. Virtual Try-On Function (*Experimental*)**
- 8. Data Management Function**
- 9. Image Optimization Function**
- 10. Responsive Design Function**

1. AI Classification Function

Purpose: Automatically identify and categorize clothing items from photos

Methods:

- **TensorFlow.js Integration Method:** Load TensorFlow.js library via CDN
- **Teachable Machine Model Loading Method:** Import two pre-trained models using Teachable Machine URLs
 - Item classifier model (tops, bottoms, dresses, etc.)
 - Style classifier model (casual, formal, athletic, etc.)
- **Image Preprocessing Method:** Resize and format images to match model input requirements
- **Prediction Method:** Run images through both models to get classification results with confidence scores

2. Weather Recommendation Function

3. Image Upload Function

4. Closet Management Function

5. Outfit Generation Function

6. User Interface Function

7. Virtual Try-On Function (*Experimental*)

8. Data Management Function

9. Image Optimization Function

10. Responsive Design Function

1. AI Classification Function

2. Weather Recommendation Function

Purpose: Provide context-aware outfit suggestions based on current conditions

- **Methods:**
- **Geolocation API Method:** Request browser location access to get user coordinates
- **Open-Meteo API Method:** Fetch real-time weather data (temperature, conditions) using coordinates
- **BigDataCloud API Method:** Reverse geocode coordinates to get readable location name
- **Temperature-Based Logic Method:** Apply rules for outfit suggestions
 - Cold (< 60°F): Suggest layers, coats, long sleeves
 - Warm (> 75°F): Suggest lighter clothing, shorts
 - Moderate: Mix of options
- **Unit Conversion Method:** Detect US location and convert to Fahrenheit, otherwise use Celsius

3. Image Upload Function

4. Closet Management Function

5. Outfit Generation Function

6. User Interface Function

7. Virtual Try-On Function (*Experimental*)

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10. Responsive Design Function

1. AI Classification Function

2. Weather Recommendation Function

3. Image Upload Function

Purpose: Allow users to add multiple clothing photos to their closet

Methods:

- **FileReader API Method:** Read image files from user's device as data URLs
- **Batch Processing Method:** Handle multiple file uploads simultaneously with concurrency limits
- **Canvas API Method:** Compress images to reduce storage footprint
 - Resize to max 800px width
 - Apply 70% JPEG quality compression
- **Progress Tracking Method:** Display upload progress bar with percentage
- **Validation Method:** Check file types (JPG, PNG, WEBP) and handle errors

4. Closet Management Function

5. Outfit Generation Function

6. User Interface Function

7. Virtual Try-On Function (*Experimental*)

8. Data Management Function

9. Image Optimization Function

10. Responsive Design Function

1. AI Classification Function
2. Weather Recommendation Function
3. Image Upload Function
- 4. Closet Management Function**

Purpose: Organize, display, and edit clothing items in the digital wardrobe

Methods:

- **LocalStorage Persistence Method:** Save closet data to browser's localStorage
- **JSON Serialization Method:** Convert JavaScript objects to JSON strings for storage
- **Data Retrieval Method:** Load existing closet items on page load
- **Category Filter Method:** Sort items by type (Tops, Bottoms, Dresses, Outerwear, etc.)
- **CRUD Operations Method:** Create, Read, Update, Delete items
 - Edit item properties (color, style, description)
 - Remove unwanted items
- **Storage Quota Management Method:** Monitor localStorage capacity and warn when approaching limits

5. Outfit Generation Function
6. User Interface Function
7. Virtual Try-On Function (*Experimental*)
8. Data Management Function
9. Image Optimization Function
10. Responsive Design Function

1. AI Classification Function
2. Weather Recommendation Function
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4. Closet Management Function

5. Outfit Generation Function

Purpose: Create coordinated outfit combinations from closet items

Methods:

- **Random Selection Method:** Pick random items from different categories
- **Smart Matching Algorithm Method:** Apply compatibility rules
 - Color coordination logic
 - Style consistency checks (don't mix formal with athletic)
 - Weather appropriateness scoring
- **Preference Integration Method:** Filter based on user's favorite colors and styles
- **Compatibility Scoring Method:** Calculate numerical scores for outfit quality
- **Visual Display Method:** Render outfit suggestions with item images in a card layout

6. User Interface Function

7. Virtual Try-On Function (*Experimental*)

8. Data Management Function

9. Image Optimization Function

10. Responsive Design Function

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5. Outfit Generation Function
- 6. User Interface Function**

Purpose: Create an engaging, responsive experience inspired by "Clueless"

Methods:

- **TailwindCSS Utility Method:** Apply pre-built responsive classes for layout
- **Custom CSS Glassmorphism Method:** Create frosted glass effect with backdrop-filter
- **Animation Method:** Add smooth transitions and hover effects using CSS keyframes
- **Tab Navigation Method:** Implement JavaScript click handlers to switch between views
 - Add Items tab
 - My Closet tab
 - Pick Outfit tab
 - Try On tab (experimental)
- **Modal/Overlay Method:** Display full-screen views for outfit details

7. Virtual Try-On Function (*Experimental*)
8. Data Management Function
9. Image Optimization Function
10. Responsive Design Function

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6. User Interface Function

7. Virtual Try-On Function (*Experimental*)

Purpose: Enable AR-style visualization of clothing on user

Methods:

- **MediaPipe Integration Method:** Load pose detection library via CDN
- **Webcam Access Method:** Request camera permissions using getUserMedia API
- **Real-time Video Processing Method:** Capture video frames from webcam
- **Pose Detection Method:** Identify body keypoints (shoulders, hips, etc.)
- **Overlay Rendering Method:** Position clothing images on detected body parts using Canvas API
- **Performance Optimization Method:** Throttle frame processing to maintain smooth performance

8. Data Management Function
9. Image Optimization Function
10. Responsive Design Function

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6. User Interface Function
7. Virtual Try-On Function (*Experimental*)

8. Data Management Function

Purpose: Handle application state and data flow

Methods:

- **Global State Object Method:** Create config.js with centralized application state
- **Module Pattern Method:** Organize code into separate JavaScript files
 - config.js → Global variables
 - utils.js → Helper functions
 - models.js → AI integration
 - weather.js → Weather API
 - upload.js → File handling
 - closet.js → Item management
 - outfit.js → Outfit logic
- **Async/Await Method:** Handle asynchronous operations (API calls, model loading)
- **Error Handling Method:** Try-catch blocks with user-friendly error messages

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- 9. Image Optimization Function**

Purpose: Efficiently handle and store clothing photos

Methods:

- **Canvas Pooling Method:** Reuse canvas elements to reduce memory overhead
- **Aspect Ratio Preservation Method:** Scale images proportionally during compression
- **Base64 Encoding Method:** Convert images to strings for localStorage compatibility
- **Lazy Loading Method:** Load images only when needed to improve performance

10. Responsive Design Function

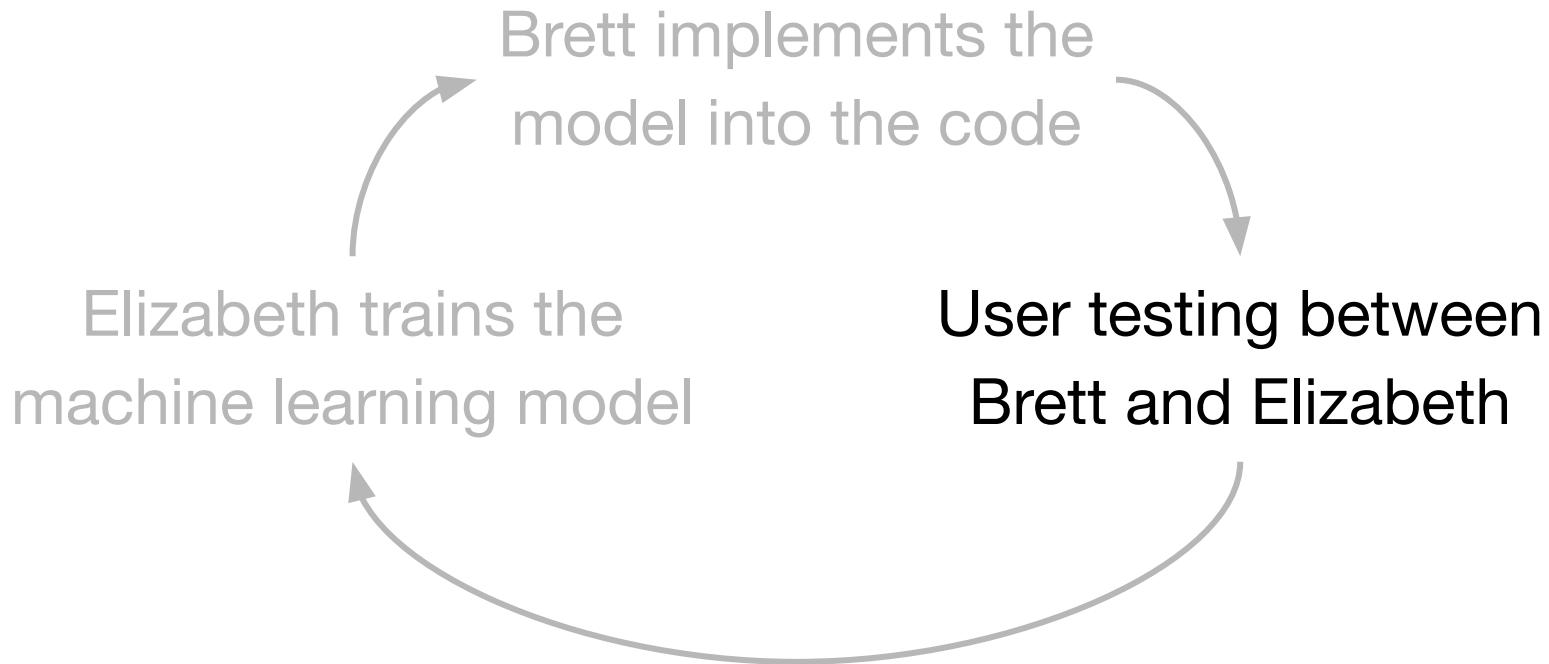
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- 10. Responsive Design Function**

Purpose: Ensure app works on desktop, tablet, and mobile devices

Methods:

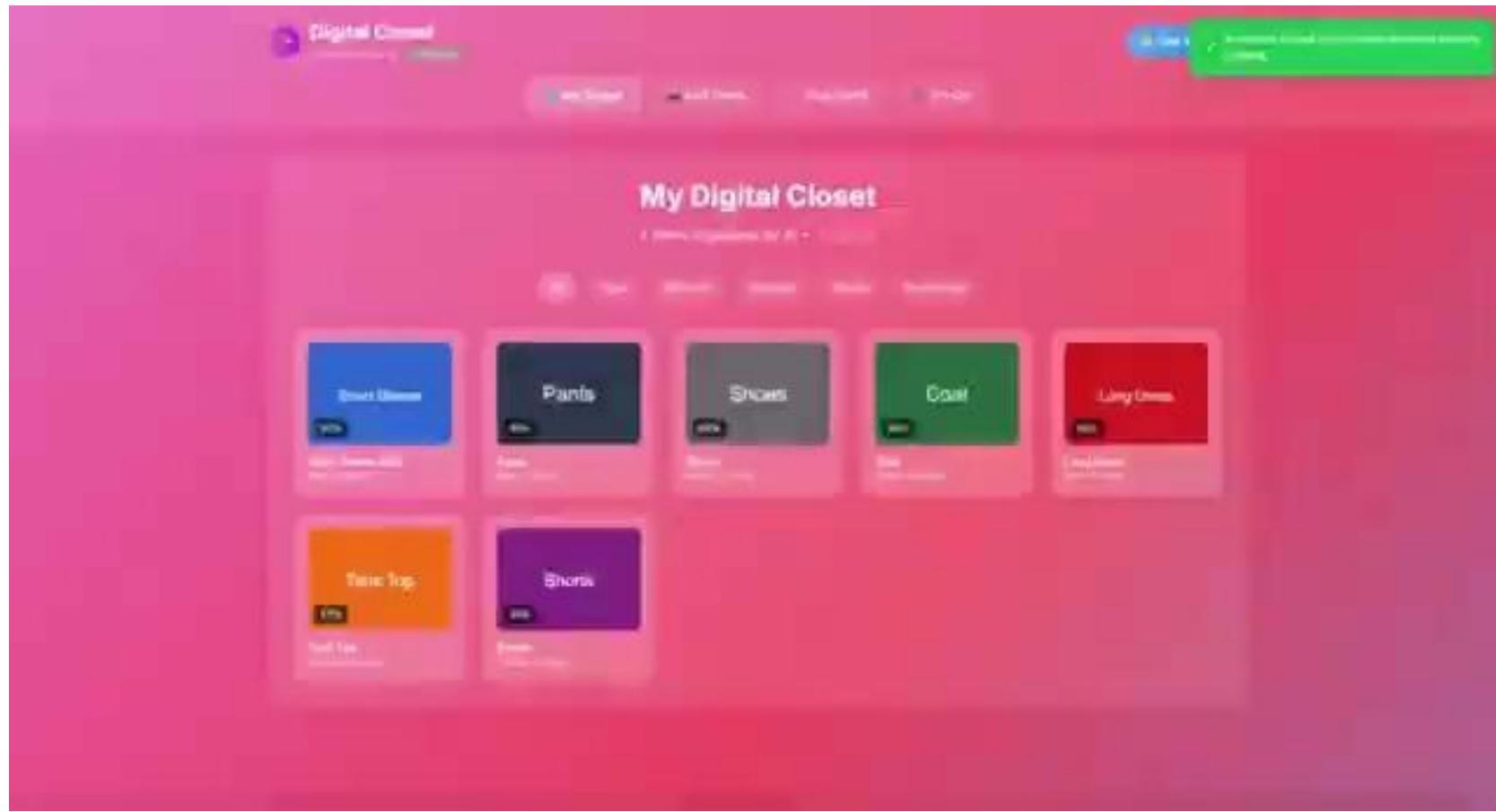
- **Mobile-First CSS Method:** Use min-width media queries in TailwindCSS
- **Flexible Grid Method:** Implement responsive layouts with CSS Grid and Flexbox
- **Touch Event Handling Method:** Support both click and touch interactions
- **Viewport Meta Tag Method:** Set proper scaling for mobile browsers

Design Process





DOCUMENTATION: Final Product



Case 1: Daily Outfit Planning

Get dressed faster in the morning by having AI suggest weather-appropriate outfits from your existing wardrobe.

Case 2: Wardrobe Organization & Inventory

Keep track of all your clothing items digitally to see what you own, avoid buying duplicates, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfits before a trip by mixing and matching items to ensure you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations you wouldn't normally think of through random generation, helping you rediscover forgotten pieces and develop your personal style.

Case 5: Thrift Store Inventory Management

Rapidly categorize and catalog incoming clothing donations using AI classification, reducing manual sorting time and enabling searchable digital inventory for online sales.

Case 6: Retail Closet Consultation Services

Personal stylists and boutiques can digitize client wardrobes during consultations to provide ongoing virtual styling recommendations and shopping suggestions.

Case 7: Sustainable Fashion Analytics

Fashion brands can analyze wardrobe data (with consent) to understand what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.

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Case 3: Packing for Trips

Plan and visualize coordinated looks for trips, ensuring you pack efficiently and have everything you need.

Case 4: Style Experimentation

Try new outfit combinations using forgotten pieces and styling tips, helping you rediscover your wardrobe.

Case 5: Thrift Store Inventory

Rapidly categorize and analyze items from thrift stores, reducing manual sorting time and increasing efficiency.

Case 6: Retail Closet Consulting

Personal stylists and boutiques can digitize client wardrobes during consultations to provide ongoing virtual styling recommendations and shopping suggestions.

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Get dressed faster in the morning by having AI suggest weather-appropriate outfits from your existing wardrobe.

Case 2: Wardrobe Organization & Inventory

Keep track of all your clothing items digitally to see what you own, avoid buying duplicates, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfits before a trip by mixing and matching items to ensure you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations by mixing forgotten pieces and helping you rediscover

Case 5: Thrift Store Inventory Management

Rapidly categorize and reduce manual sorting time and enabling search

Case 6: Retail Closet Consulting

Personal stylists and provide ongoing virtual styling recommendations and

Case 7: Sustainable Fashion

Fashion brands can analyze wardrobe data (with consent) to understand what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.



Case 1: Daily Outfit Planning

Get dressed faster in the morning by having AI suggest weather-appropriate outfits from your existing wardrobe.

Case 2: Wardrobe Organization & Inventory

Keep track of all your clothing items digitally to see what you own, avoid buying duplicates, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfits before a trip by mixing and matching items to ensure you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations by mixing items from your closet with forgotten pieces and developing coordinated looks.



Experimentation, helping you rediscover

Case 5: Thrift Store Inventory

Rapidly categorize and catalog items from thrift stores, reducing manual sorting time and enabling searchable databases.

Case 6: Retail Closet Consulting

Personal stylists and boutiques provide styling recommendations and shopping lists to help consumers make the most of their wardrobes.

Case 7: Sustainable Fashion Analysis

Fashion brands can analyze consumer data to understand what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.

Case 1: Daily Outfit Planning

Get dressed faster in the morning by having AI suggest weather-appropriate outfits from your existing wardrobe.

Case 2: Wardrobe Organization & Inventory

Keep track of all your clothing items digitally to see what you own, avoid buying duplicates, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfits before a trip by mixing and matching items to ensure you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations you wouldn't normally think of through random generation, helping you rediscover forgotten pieces and develop your personal style.

Case 5: Thrift Store Inventory Management

Rapidly categorize and catalog items from thrift stores, making it easier to find specific items and enabling searchable digital inventories.

Case 6: Retail Closet Consultation Services

Personal stylists and boutiques can offer virtual consultations to provide ongoing virtual styling services and recommendations and shopping lists.

Case 7: Sustainable Fashion Analytics

Fashion brands can analyze what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.



Case 1: Daily Outfit Planning

Get dressed faster in the morning by generating outfit suggestions based on your preferences and weather conditions.



Find new outfit ideas and generate combinations of items from your existing wardrobe.

Case 2: Wardrobe Organization

Keep track of all your clothes and accessories, and automatically identify duplicates, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfits before traveling, ensuring you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations using AI-generated style suggestions. Discover forgotten pieces and develop your personal style.

Case 5: Thrift Store Inventory Management

Rapidly categorize and catalog incoming clothing donations using AI classification, reducing manual sorting time and enabling searchable digital inventory for online sales.

Case 6: Retail Closet Consultation Services

Personal stylists and boutiques can digitize client wardrobes during consultations to provide ongoing virtual styling recommendations and shopping suggestions.

Case 7: Sustainable Fashion Analytics

Fashion brands can analyze wardrobe data (with consent) to understand what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.

Case 1: Daily Outfit Planning

Get dressed faster in the morning by having AI suggest weather-appropriate outfits from your existing wardrobe.

Case 2: Wardrobe Optimization

Keep track of all your items and analyze trends to declutter, donate items you no longer wear, and identify gaps in your wardrobe.

Case 3: Packing for Travel

Plan and visualize outfit combinations to pack efficiently and have coordinated looks for your trip.

Case 4: Style Experimentation

Try new outfit combinations by suggesting forgotten pieces and styling them with AI.

Case 5: Thrift Store Inventory Management

Rapidly categorize and catalog incoming clothing donations using AI classification, reducing manual sorting time and enabling searchable digital inventory for online sales.

Case 6: Retail Closet Consultation Services

Personal stylists and boutiques can digitize client wardrobes during consultations to provide ongoing virtual styling recommendations and shopping suggestions.

Case 7: Sustainable Fashion Analytics

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Case 2: Wardrobe Organization & Inventory

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Case 3: Packing for Travel

Plan and visualize outfits before a trip to ensure you pack efficiently and have coordinated looks.

Case 4: Style Experimentation

Try new outfit combinations you would have never thought of using forgotten pieces and develop your personal style.

Case 5: Thrift Store Inventory Management

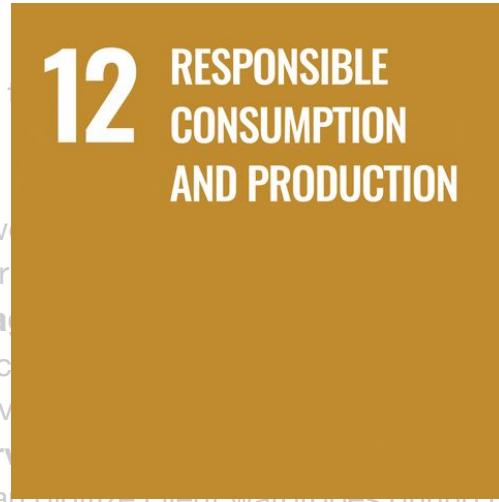
Rapidly categorize and catalog incoming items using AI-powered image recognition and enabling searchable digital inventories.

Case 6: Retail Closet Consultation Services

Personal stylists and boutiques can digitize client wardrobes during consultations to provide ongoing virtual styling recommendations and shopping suggestions.

Case 7: Sustainable Fashion Analytics

Fashion brands can analyze wardrobe data (with consent) to understand what consumers actually wear, reduce overproduction, and design items that fill real wardrobe gaps.



This Digital Closet application demonstrates the potential for AI-powered wardrobe management at the consumer level, but significant opportunities exist for expansion into commercial and sustainability-focused applications. Future development could include:

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Enhanced AI Capabilities

Enterprise Solutions

Social & Marketplace Features

Advanced AR Integration

Cross-Platform Expansion

This Digital Closet application demonstrates the potential for AI-powered wardrobe management at the consumer level, but significant opportunities exist for expansion into commercial and sustainability-focused applications. Future development could include:

Enhanced AI Capabilities	Enterprise Solutions	Social & Marketplace Features	Advanced AR Integration	Cross-Platform Expansion
Training more sophisticated models to recognize fabric types, brand identification, wear patterns, and damage assessment for quality control in resale markets.	Adapting the platform for thrift stores, consignment shops, and rental services with multi-user inventory management, pricing recommendations based on item classification, and integration with e-commerce platforms.	Building community elements where users can share outfits, swap items, or sell directly from their digital closets, creating a circular fashion economy powered by accurate AI categorization.	Developing production-ready virtual try-on technology with realistic fabric physics, lighting simulation, and body measurement integration for accurate fit prediction.	Creating mobile applications with offline capability, cloud synchronization, and integration with smart home devices (e.g., displaying outfit suggestions on smart mirrors).

To recreate this project, implement functions in this order:

- Setup HTML Structure → Semantic HTML5 method
- Style with CSS → TailwindCSS + custom glassmorphism method
- Initialize Config → Global state management method
- Add Utilities → Helper function library method
- Integrate AI Models → TensorFlow.js + Teachable Machine method
- Build Upload System → FileReader + Canvas compression method
- Create Closet Manager → localStorage CRUD method
- Implement Weather → Geolocation + API fetch method
- Generate Outfits → Algorithm + scoring method
- Add Try-On (Optional) → MediaPipe + webcam method



Ryo Suzuki 5:49 PM

@channel Hi All. I have aggregated peer-review results. Here is the **people-choice best project awards**, given both average score as well as aggregated weighted points (the aggregated weighted points are calculated as Top 1 = 5 points, Top 2 = 4 points, Top 3 = 3 points, Top 4 = 2 points, Top 5 = 1 point)

Congrats and great work for those who won.

A grader will get back to you the final score on Canvas. Also, if you haven't presented last week, please give your presentation tomorrow.

- Top 1. All Nighter Unity Game by [@Aiden Zavala](#)
 - Average Score: 9.60 / 10
 - Weighted Points: 37 pts (1st of 15)
 - Comments Summary: A polished, fun, and engaging solo Unity game widely praised for its creativity and playability.
- Top 1. Digital Closet by [@Brett Rabbiner](#) and [@Elizabeth Saunders](#)
 - Average Score: 9.69 / 10
 - Weighted Points: 31 pts (2nd of 15)
 - Comments Summary: A highly polished, feature-rich organizational app with strong market potential and excellent UI design.
- Top 3. AR Menu by [@Kaitlyn Samuelian](#) and [@Elías Montiel](#)
 - Average Score: 9.50 / 10
 - Weighted Points: 30 pts (3rd of 15)
 - Comments Summary: A practical AR tool for translating foreign menus with impressive OCR integration and clear real-world value.



**Thank you!
Any questions?**