**Prototype #1 Meeting Agenda**

**When & Where:** March 18th, 2020 ~ 1:00pm - 2:00pm via Zoom

Meeting ID: 891 237 641

**Attendees**: Dr. Kristin Stewart, Dr. Shaunn-inn Wu, Stoic Solutions Team

**1:00pm - Formal Greetings**

**1:05pm - Begin prototype #1 meeting**

**Jordan - Current requirements:**

* Creating the database on AWS using amazon (RDS) Relational Database Service
* Mapping routes along San Marcos streets
* Querying GSV (Google Street View) API (Application Programming Interface) for panoramic images.
* Saving images to disk for processing with the machine learning algorithm.
* Processing images and receiving litter metrics for storage on AWS database.

**Adam/Brian - Project Management**

* Recap working at $28.00 an hour with the cost of AWS being $0.29 cents an hour
* PHASE 0 & 1 - Estimated Projected based on previous group’s report, but we ended up using a similar amount of time, most time accumulated on Meetings, First Report, aws setup.
* PHASE 2 (JAD 2) - Projected more time due to Phase 0 & 1 outcome, but ended up using significantly less hours (18 less). Most time was accumulated at meetings, AWS testing, and reports.
* PHASE 3 - Phase 3 is not projected here on the bar graphs because phase 3 is not completed until after this meeting. In the next upcoming report you will see the actual hours and price accrued in phase 3. This phase will have fewer AWS server uptime hours than Phase 2 because the majority of Prototype 1 was spent creating the boneworks of the database and gathering the images needed.

**Enrique - List of deliverables:**

* Create and populate the database on the AWS account.
* Pull google images from the agreed upon route and run them through the machine learning algorithm.
* GPX files for the routes ran by our scripts (for future use of historical data).

**Analysis and Design:**

**Matthew:**

* The UI team needs a reasonably high resolution of data, yet an automated method of sampling points in San Marcos is not a simple task.
  + Stoic Solutions chose to map routes manually for a large portion of streets giving us a very high resolution of data points.
  + Pros: Cheaper (requires less calls to Google’s API which is expensive), higher resolution, control of possible duplicate routes.
  + Cons: Not scalable due to the high degree of manual route creation, time consuming, gaps in data from human error.

**Jerry:**

* The forward and backward orientations from GSV images would produce low rates of trash identification and would also be duplicated on subsequent images.
  + This was resolved by our team through the use of a Python script to calculate the current heading and capturing the images to the left and right along the specified path (capturing only the sides of the street).
    - See 360 Image Pulling Figure 1

**Connor: Database**

* Creating the Entity Relationship DIagram (ERD) for the database was very simple as all of the data we need will be in the same table.
  + The data that will be passed on to the UI team from the images will be the date taken, latitude, longitude, level of litter, and number of litter pieces.

Receive feedback, uncover further requirements, modify list of deliverables, and modify project scope.

**Brian - Elicit decisions from the customer.**

* Confirm and agree that the route for mapping San Marcos streets via Jordan’s method is ideal or final.
* Using a t3.micro instance on AWS relational database service (RDS), we are estimating that the database cost will be roughly $10 if we had the database running all month long.
  + To set-up the database on AWS, we are estimating that cost to be $10 if we had it running all month long.

**Adam - Discuss UI team communication and goals**

* We had a successful meeting with the UI team representative and solidified the database structure needed. We will be planning our next meeting with them shortly and have a representative from their team on our discord server who sees all of our updates.We also plan to have the images we have collected transferred into data in the database. Before the prototype 2 meeting we will have sample data for the UI team to extract and use for their next prototype meeting.

**As a team - communicate with the customer on when the next meeting will be…**

**Chris - Next meeting deadline is Wed 4/15**

* Set next meeting for Wed 4/15 at 1PM
* Final Presentation is Mon 5/11 4PM

**1:50pm - Summary of notes**

**2:00pm - Meeting adjourned!**

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* **Jordan - Current requirements**
* **Adam/Brian - Project Management**
* **Enrique - List of deliverables**
* **Matthew - Analysis and Design**
* **Jerry - Testing the Prototype**
* **Connor - Database**
* **Brian - Elicit decisions from the customer**
* **Adam - Discuss UI team communication and goals**

**As a team - communicate when the next meeting will be...**

**1:50pm - Summary of notes**

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