InstaAudit - PRD

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Goals

Our project seeks to estimate the performance of an Instagram post before it goes live in order to maximize the effectiveness of a business's Instagram marketing account. A business owner who markets to their customers through Instagram could greatly benefit from a tool that predicts the quality of their posts algorithmically before posting. We plan on training a machine learning algorithm with a dataset scraped from business accounts located on Instagram. Other Instagram tools offer ways to schedule and edit postings before they go up, but Insta-Audit will allow a level of precognition to the process of brand marketing.

User Persona

- Our customers have a focus on increasing their brands recognition and increasing participation within their community.
- We have two primary personas that represent two ends of a spectrum
    - At one end is the marketer for a larger company that has less of a decisive role in the company and is focused more on an additive role to their company.
    - At the opposite end we have the boss who is in control of all aspects of the company and desires a tool to ease the work for maintaining their social media presence.
- The roles of our customers are all users that sign-up for our system and have equal access to the tools we offer.

Jonathan Jones

Title: Brand Ambassador
Decision-Maker: No
Industry: Retail
Age: 24
Salary: $33,000/year
Education: Highschool Diploma

Goals: Maintain a company's brand and increase customer engagement through Social Media.

Challenges: It is difficult to know all of the intricacies of online culture and to pinpoint what really resonates with a community.

How we Help: Discern the patterns in posts on Instagram that receive a lot of engagement.

Messaging Strategy: Focus on increasing Instagram post engagement by providing a machine learning model that determines which posts will gather more attention.

Sammy Sosa

Title: Small Business Owner
Decision-Maker: Yes
Industry: Pharmaceuticals
Age: 55
Salary: $100,000/year
Education: Masters in Business

Goals: Quickly balance their Social Media account so that they can focus on other things.
Challenges: Having to choose between multiple advertising methods.
How We Help: Ease the process of creating posts and increasing confidence in selected photos.
Messaging Strategy: Present ourselves as an affordable method for increasing engagement with little work required from our customers.

Product Features

Overall Themes

- A web app allows our software to be easily accessible with hardware that is common among companies.
- The user experience for our software must be as simple and direct as possible. With an emphasis on minimizing clicks and having very few elements on screen at once.
- Our REST API handles all the requests made by our users and connects to our machine learning model through FLASK.

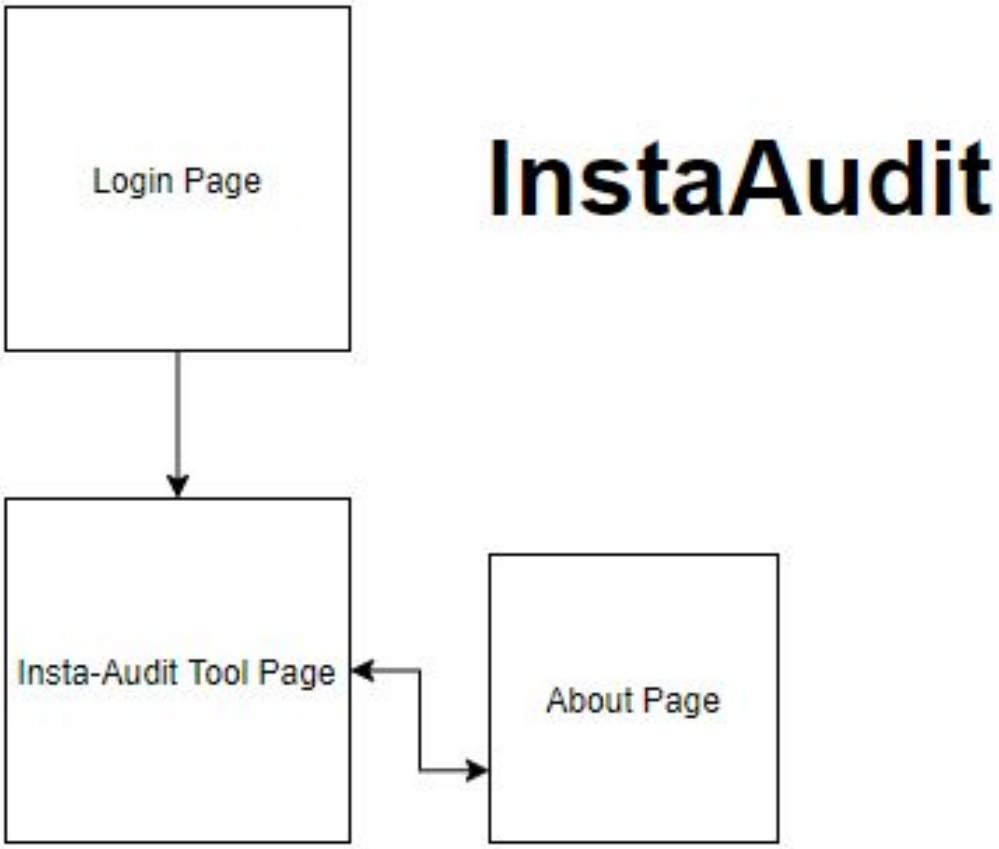
Actual Features

- **Machine Learning Model**
    - Predicts how well a post's engagement will be.
    - Inputs include user uploaded images, number of followers tied to the instagram account, the industry the company is involved in, and a ratio of likes and comments per post.
    - Indicate to the user what is good and what is bad about an image.
    - Handle unexpected results like viral posts where likes and comments may exceed follower count.
- **Web App**
    - Easily accessible from anywhere with an internet connection.
    - User signup/login/deletion.
    - Hash user passwords to store on our database.
    - Image POST/GET/PATCH/DELETE.

    - JSON Web Token authorization.
    - Use a parse to store images from user POST requests on to the server.
    - Upload images to our site and connect them to a user.
    - Upload images directly to Instagram from our site.
    - MongoDB connection through REST API.
    - Handle Cross-origin resource sharing (CORS) for our REST API to our database.
    - Error handling for user generated HTTP requests.
    - Error handling for users and images stored on our database.
- **Dataset**
    - Send HTTP requests to Instagram API.
    - GET data from Instagram post.
    - GET multiple posts from an Instagram account.
    - Add user uploaded images to the training set for our model

Server Sitemap

Our current plan is designed to be a single page tool that allows the user to upload photos to be ranked by our model.



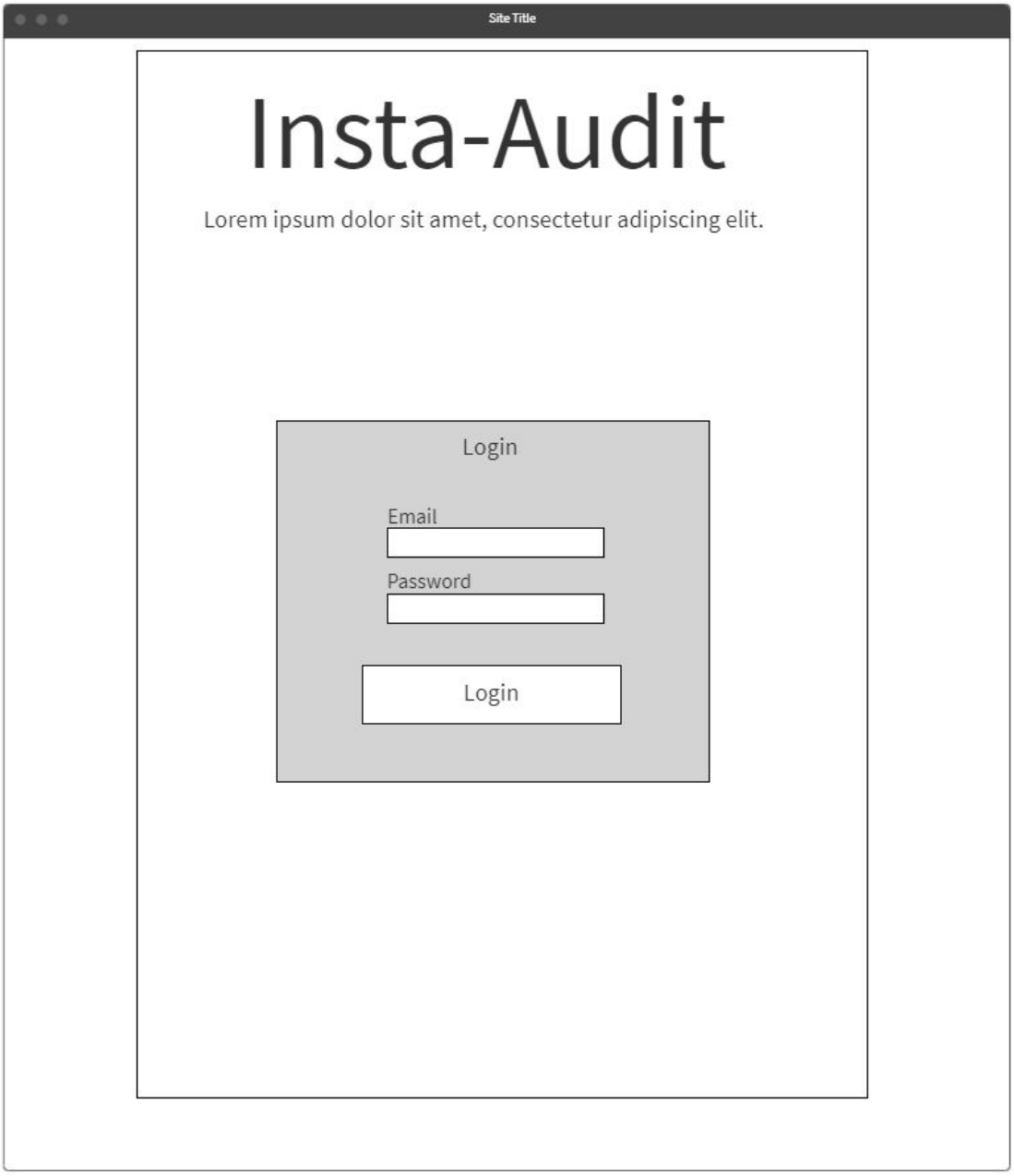
Page Descriptions

Login Page	**1. Email/Password Text Box** **2. Login Button**
Audit-Tool Page	**1.Page Select (Tool page / About page)** **2.Title** -Flashy title. Will be custom designed at a later date. **3.Description** -More In depth paragraph about the tool, what its for, how it works, how to use it. **4.Tool Section** -User Login -Box to upload Image -Text entry to paste caption -Section to enter post timeframe (date/time) **5.Ranking Section** -Shows the results of our model estimating the result of their image/caption -Either a 5 star/ A-F / 1-10 Ranking. -What they should expect if they posted this image. -Tool-tip showing suggestions on how they can make their post better if they received a low score. **6.Page Bottom** Further Info about InstaAudit and our Team **7. Contact Us** Contact information of the team

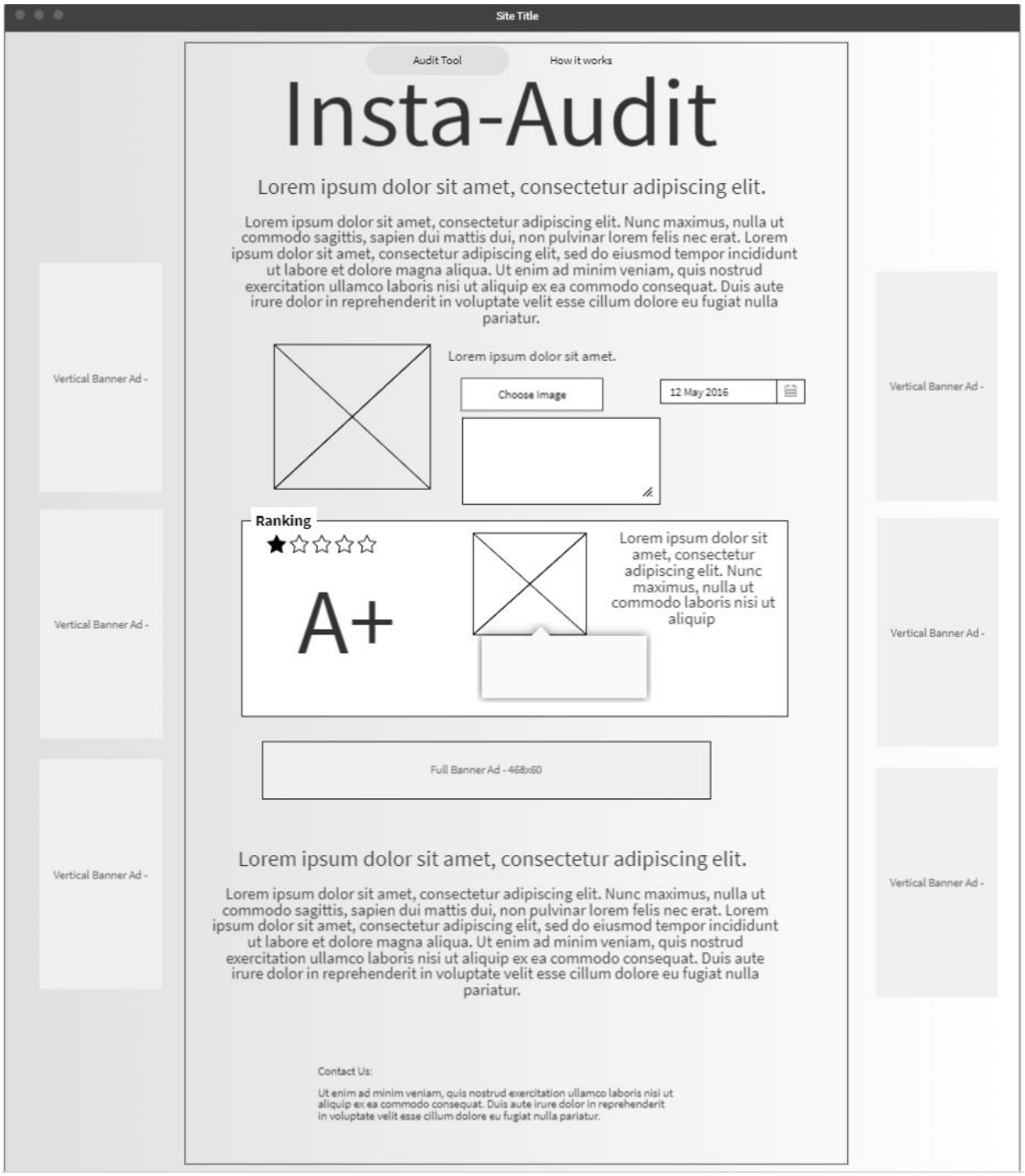
About Insta-Audit	**1.Page Select (Tool page / About page)** **2. Title** -How does InstaAudit work? **3.Description** -Quick paragraph about the tool, what its for, how it works, how to use it. **4.Tenants** - Main tenants of the model and how it works. **5.Video Section** -Video demo showing the best practices for using Insta Audit More info about **7. Contact Us** -Contact information of the team

Wireframes

Login Page



Audit Tool Penis



About-Us Page

Interfaces

One of our main goals for this product is to create an extremely intuitive user interface so that any employee can utilize our tool without extensive training. Currently, we have proposed the following interfaces:

- User Interface
    - Login Page
        - Username
        - Password
    - Audit Tool Page
        - Tool selection
            - Image upload box
            - Text entry
        - Predicted Rating
        - Contact Us
    - About Us Page
        - Play Demo Video
        - Contact Us
- 3rd Party/ External APIs
    - Instagram API
        - Convert JSON file from various instagram pages into usable data to train our model
    - Mongo Database API
        - Website will communicate with our MongoDB to authenticate credentials and store user data.
    - Machine Learning Model API
        - Upload a user's image and return a ranking based on recent trends for product type

Additional Functional Requirements

In addition to the product features listed in the previous section we would like to implement the following features:

- Batch image processing
    - Import multiple images and sort by ranking
- Test multiple filters at once
- Comparing multiple posts
- Image Editing
    - Able to perform basic image editing before posting
        - Saturation
        - Hue
        - Filters
        - Etc.

Non-Functional Requirements

Our product is designed for enterprise applications and should posses the following Non-Functional Requirements:

- Reliability
    - Server uptime needs to be as close to constant as possible so that our customers can utilize our product at any time inspiration hits them
- Consistency
    - Insta-Audit needs to generate predictions that can be duplicated if the same image is uploaded to our model
- Accuracy
    - Constant model training will be necessary to keep up with the ever changing fads of digital marketing
- Usability
    - A great and intuitive UI will ensure that our product stand above any future competitors
- Integrity
    - Current plans indicate that Intsa-Audit will allow users to log in to their instagram account which may pose security concerns which our application will need to address

Performance Requirements

The major goal of our deliverable software is to provide the user a prediction of engagement on a given image in a reasonable amount of time without noticeable lag. In a competitive environment, a business might have a need to quickly launch a marketing campaign to beat out a competitor. Therefore, there is a high priority on our program to complete an image ranking as quickly as possible; this should be a matter of minutes but no more than an hour for a previously trained model, however, training a new model could take upwards of several days to properly fine tune into a reliable product. With this in mind, our product should implement a time estimate/ loading bar for such situations.

Future Iterations

- Implement mobile application.
- Advanced model training based on product type or target audience.
- Verify post’s prediction.