

# ACL Risk Estimator

Team E2Big  
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# Members

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# Expected Environments of Use

- High School/College Athletic Facilities
- Home Filming Operations
- Medical Offices



# Expected General Users

- High School/College Coaches
- Medical Professionals
- Athletes (maybe)

*“It is important to point out that one cannot design a user experience, only design for a user experience” (Preece, Sharp, and Rogers)*

# Use Scenario I: Vanilla User

**Name: Coach Jim Brown**

## **Background:**

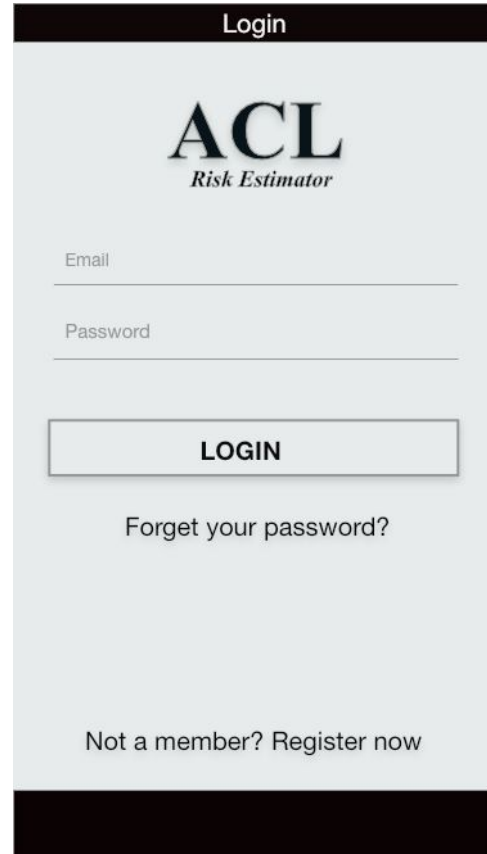
Jim is the coach of a football team at a rural high school in Upper Michigan. Last season his star RB Nathan Stevens was incapacitated by an ACL injury. After the injury, the regions athletic trainer informed Jim of a website he could use to get professional evaluation regarding proneness to ACL injury for his athletes. The trainer claimed it could be achieved by simply uploading a video of a vertical drop test.



# Step 1: Account Creation

Back in the locker room, Jim investigates the ACL Risk Estimator website he'd been referred to on his smartphone's web browser. He's greeted by a simplistic login page and taps the "Register now" link.

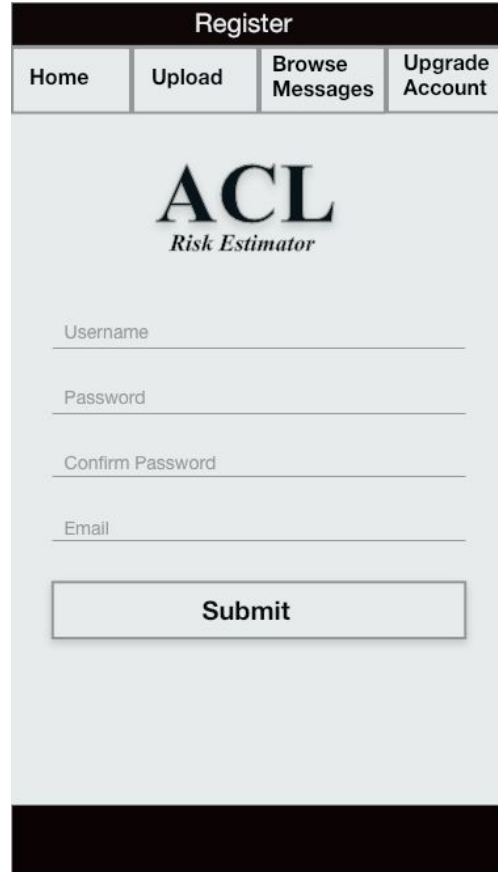
***Assumption 1: Smart phones and related cameras are so pervasive, even your football coach should have one.***



The image shows a mobile application interface for the ACL Risk Estimator. At the top, there is a black header with the word "Login" in white. Below the header, the ACL logo is displayed in a large, bold, serif font, with "Risk Estimator" written in a smaller, italicized serif font underneath. The interface features two input fields: "Email" and "Password", each with a horizontal line below it. Below these fields is a rectangular button with a thin border and the word "LOGIN" in bold, uppercase letters. Underneath the button, the text "Forget your password?" is centered. At the bottom of the page, the text "Not a member? Register now" is centered. The entire page has a light gray background, and there is a black footer bar at the very bottom.

# Account Creation Continued

Jim easily maneuvers the data entry fields for his account creation and is quickly granted access to the site. Upon hitting **Submit** the app provides feedback signifying his success in creating an account.

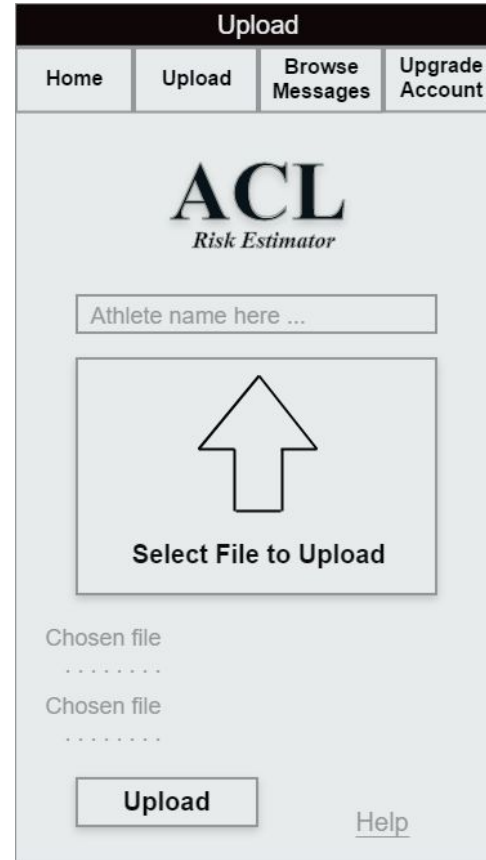


The screenshot shows a mobile application interface for the ACL Risk Estimator. At the top, there is a black header with the word "Register" in white. Below the header is a navigation bar with four buttons: "Home", "Upload", "Browse Messages", and "Upgrade Account". The main content area is light gray and features the ACL logo, which consists of the letters "ACL" in a large, bold, serif font, with the words "Risk Estimator" in a smaller, italicized serif font below it. Below the logo are four text input fields, each with a label above it: "Username", "Password", "Confirm Password", and "Email". At the bottom of the form is a large, rectangular button with a black border and the word "Submit" in bold black text. The entire form is set against a light gray background, and there is a black bar at the very bottom of the screen.

## Step 2: Video Upload

After a *quick* glance at a description of the site and required properties of video uploads on the **Home** page, Jim taps the **Upload** tab. He goes to retrieve Nathan's brother Gregor, and films him performing a vertical drop test from a bench as instructed by the site.

***Assumption 2: A coach has basic knowledge of how to navigate a smartphone environment and film on a smartphone.***



The screenshot shows a mobile application interface for "ACL Risk Estimator". At the top, there is a navigation bar with a black background and white text, containing the word "Upload". Below this, a horizontal menu has four tabs: "Home", "Upload", "Browse Messages", and "Upgrade Account". The "Upload" tab is currently selected. The main content area features the "ACL Risk Estimator" logo in a serif font. Below the logo is a text input field with the placeholder text "Athlete name here ...". Underneath the input field is a large square button with a white outline and a black arrow pointing upwards, with the text "Select File to Upload" centered below the arrow. At the bottom of the screen, there are two labels, "Chosen file", each followed by a series of dots representing a file name. A large "Upload" button is positioned at the bottom center, and a "Help" link is located at the bottom right corner.



# Video Upload Continued

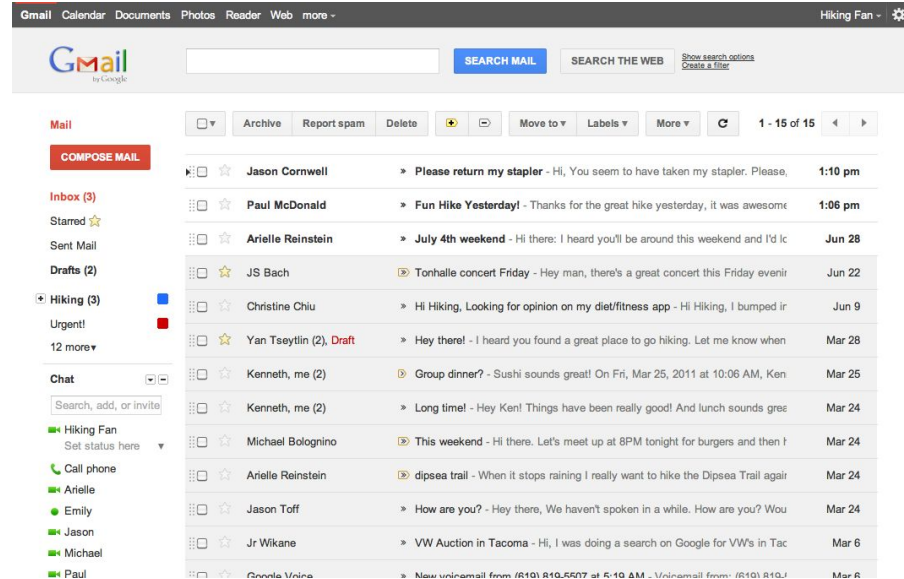
Upon completion, Jim taps the “Select File to Upload” image and uses his device’s directory navigation system to select the file. He types in Gregor's name and hits the **Upload** button.

Oops, an error appears informing Jim the *video is too long, exceeding the 15 second maximum*. Coach refilms Gregor and tries again, this time to success verified by feedback text. On the Home page Jim sees a list of videos he’s uploaded.

The screenshot shows a mobile application interface for "ACL Risk Estimator". At the top, there is a black header with the word "Upload" in white. Below the header is a navigation bar with four buttons: "Home", "Upload", "Browse Messages", and "Upgrade Account". The main content area features the "ACL Risk Estimator" logo, a text input field with the placeholder "Athlete name here ...", and a large button with an upward-pointing arrow and the text "Select File to Upload". Below this button are two labels, "Chosen file", each followed by a series of dots representing a list of items. At the bottom of the screen, there is an "Upload" button and a "Help" link.

# Step 3: Feedback

A few days later, Jim receives an email stating his video for Gregor has been evaluated. He clicks the link in the email, and is brought to the login page. Once logged in he finds *Kyle has been rated a 9 on a scale of 10 for being prone to ACL injury (very high risk)*. The professional providing the feedback has listed recommendations given the severity of the evaluation. Jim has the ability to respond to the professional with any questions in a text box below.



# Use Scenario II: Professional User

**Name: Trainer Debbie Smith**

## **Background:**

Debbie is a qualified athletic trainer serving an entire county in Upper Michigan. She recognizes the severe need for greater medical resources in the UP having witnessed many preventable injuries. A fellow trainer in the next county over recommends she use a website called ACL Risk Estimator to help contribute to UP medical resources, a tool amplifying resources through the use of remote diagnostics.



# Step 1: Account Creation/Activation

Similarly to Jim, Debbie goes through the same process to create account, however after she has created her vanilla account, she clicks the upgrade account tab to input the referral code provided by her colleague.

***Assumption 1: Professionals will only provide referrals to other professionals.***

Upgrade Account

Home Upload Browse Messages Upgrade Account

**ACL**  
*Risk Estimator*

**Activate Vanilla Account**

Activation Code Here ....

Activate

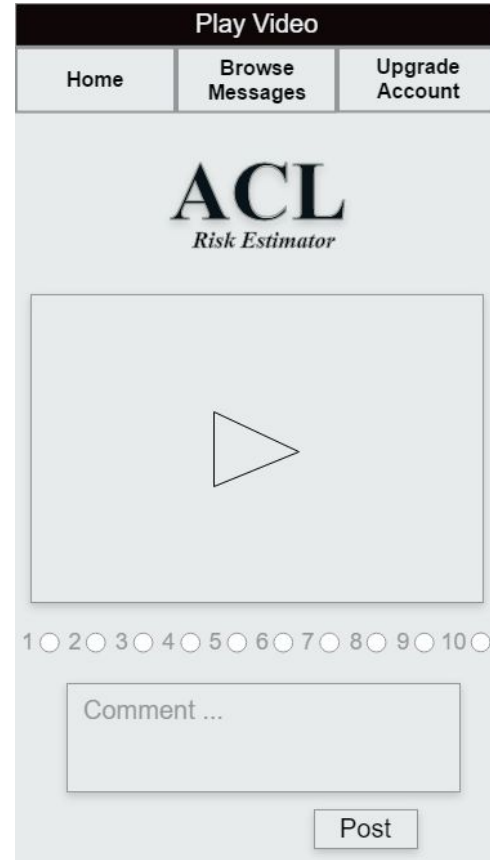
## Step 2: Browse Videos

After receiving a confirmation email, Debbie clicks the link in it and gets to work. After logging in again she browses the videos populated on her home page. She clicks the first one.

| Browse Videos                       |                 |                 |
|-------------------------------------|-----------------|-----------------|
| Home                                | Browse Messages | Upgrade Account |
| <b>ACL</b><br><i>Risk Estimator</i> |                 |                 |
| ● Athlete:<br>Gregor Stevens        | 2/5/2017        | ▶               |
| Coach:<br>Jim Brown                 |                 |                 |
| ● Athlete:<br>Lamar Burton          | 2/5/2017        | ▶               |
| Coach:<br>Bill Parsec               |                 |                 |
| ● Athlete:<br>Nando Jasko           | 2/5/2017        | ▶               |
| Coach:<br>Dave McInnes              |                 |                 |

## Step 3: Watch and Rate

Debbie simply watches the video, clicks her evaluation rating on the radio button below the video, and leaves textual feedback for the uploader. If the user has any response, those will be directed to her inbox. After posting her evaluation the app provides feedback of success, and redirects her to the Home page.



# Expected Errors/Issues

## Issues affecting all sites

- SQL injection
- Unrelated/unnecessary postings
- Cross-site scripting

## Issues of practicality and technicality

- Video length (must be < 15 seconds)
- Incorrect video format (must be MP3 format)
- Redundant uploads
- Comments (text limitations)
- Unsatisfactory video specifications

# Usability Concerns

- Reversal of Actions
- Consistency
- Offer Informative Feedback
- Proximity of Related Actions
- Search Function