Objective

To provide a secure, private accessible platform for clients to express mutual romantic interest with potential suitors.

Concept

Shadkan is packaged as a mobile app for iOS/Android. Users can rate their Facebook friends on a discrete scale, and we store pairs of ratings as potential matches. When a User requests a Match, we provide the one with highest Compatibility that’s above each side’s individual “Desperation Threshold”. The front-end app runs on Steroids and AngularJS, and communicates with the back-end Node.js server via RESTful API calls.

Comparison

<table>
<thead>
<tr>
<th>Application</th>
<th>Match</th>
<th>Tinder</th>
<th>Shadkan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows you to view potential candidates and select ones you like.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Integrates with Facebook to no need to create separate account.</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rate potentials based on interest.</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Determined matches based on the algorithms of your heart.</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Workflow

1: Login with Facebook
2: Get Friends
3: Rate Friends
4: Store Ratings
5: Return Match

Deployment Diagram

Shadkan Mobile App
Facebook Graph API
Shadkan Server

References

[1] Node.js: nodejs.org
[4] Restify: mcavage.me/node-restify

Acknowledgement

We would like to thank our families, Dr. Jha for his invaluable support, and all the coders of the open source libraries that made this possible.

Design Principles

- **Gamification**
  - Shadkan makes matchmaking a fun and exciting experience for users.
- **Security**
  - Server protected from SQL injections and buffer overflows. No Heartbleeding here!
- **Accessibility**
  - Download the app, sign in with Facebook, and start rating friends without hassle!
- **Privacy**
  - With Shadkan, there’s absolutely no way for anyone to find out you’re using this app, unless they turn out to be your perfect match!

Compatibility Index Formula

\[
\text{COMPATIBILITY} = \text{User 1} \times \text{User 2}
\]

We calculate Compatibility of two users by taking the product of their ratings of each other, to maximize mutual common interest and minimize one-sided affairs.