TEAM TOMODACHI

PokeCake

WITH STEVE BULGIN

Sarah Liu
Andrew Godfroy
Windjy Jean
Patrick Gingras
Patrick Cowan

Pokémon
GO

Oi, Jason!

- project rundown: community pokemon go website
- currently there are many different chat groups spread among many different chat services
- Barrhaven group will be our starter test group

Raid Organization

- raid organization is currently largely just done with whatsapp or other chat services
- would like the ability to create “raid trains” - consecutive raids mapped out
- big caveat: making it a phone web application
    - would be great to receive push notifications (e.g. lobby up, get out)
    - might want chat integration, possibly with discord
- want to integrate google maps api (or other mapping service) for directions, etc.
- might want to make raids public or private
    - can send invite codes for private rooms
- important to know raid pokemon star levels

Trade Section

- list all current pokemon, which are available to trade, which are requested
- need a pokedex database
- need ability to list pokemon stats
- need user profiles

- with user's pokemon listed
- possible to tie in with discord?
- offer multiple trades (i.e. 2 for 1?)
- reporting system for moderator(s)
- ability to block users

Profiles

- want place where users can show achievements/medals
  - i.e. miles travelled, user level
- possibly use google and/or discord to login
  - client preference is discord account login
- might want option to make profile public or private
- might want ability for admins to create custom site-based achievements
  - might need to manually enter user achievements - rely on the honour system
  - possibly integrate an image reader to enter achievements
- track community milestones
- permalinks to profile
- profile customization a-la steam or linkedIn
  - i.e. display a user-selected selection of achievements, etc.

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Leaderboards

- a database is required
- a spreadsheet already exists
- would like to filter by region

PVP

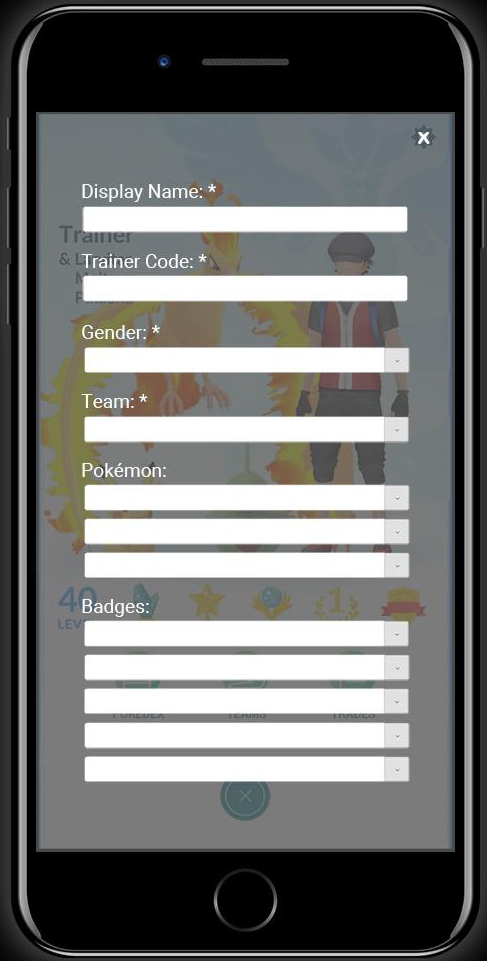
- facilitate battles (BO3)
- organize availabilities to battle
- maybe utilize push notification
- silph league -> tools already exist
- matchmaking system based on region/distance
- wants a tool to tell you what cp values need to be for you to level a pokemon while keeping it in the appropriate league
- tool to help formulate the best team (based on combined stats) for certai

Site

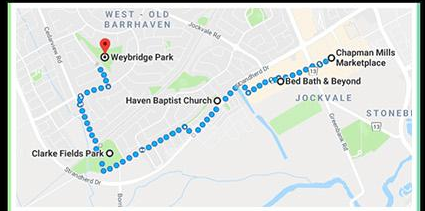
- must be responsive
- progressive web app?
- includes block system, reporting syst

Hosting

- client prefers bot
- we need t


Display Name: *
Trainer Code: *
Gender: *
Team: *
Pokémon:
Badges:

Trainer
& Larvitar
Moltres
Pikachu
40
LEVEL
POKEDÉX
TEAMS
TRADES



CREATE ROOM

JOIN ROOM

CHAPMAN MILLS MARKETPLACE 0:29:37

50 Marketplace Ave
Nepean, ON K2J 5G3

BED BATH & BEYOND 0:49:37

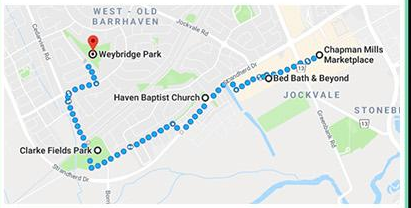
3777 Strandherd Dr.
Nepean, ON K2J 4J7

CLARK FIELDS PARK 1:39:37

93 Houlahan St.
Nepean, ON K2J 3Y7

WEYBRIDGE PARK 1:59:37

ROOM # 000000



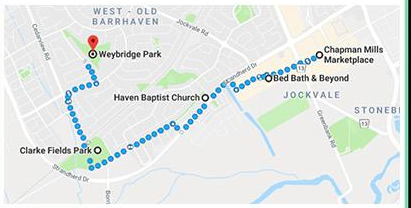
NEXT RAID IN 0:29:37

CHAPMAN MILLS MARKETPLACE 0:29:37
50 Marketplace Ave
Nepean, ON K2J 5G3

Steveisacoolguy
does anyone need a ride to the raid?
welikeyoutooJason
I do
Steveisacoolguy
okay. I'll pick you up at your house in 10
welikeyoutooJason
Thank you
?

Enter your message... Send

ROOM # 000000



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| Send

Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
123 space return

Project Management

- Communication
- Documentation
- Command Structure
- Resource Management
- Research

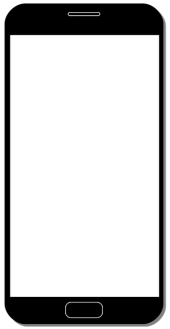
Communication

Internal

- Discord
- Get-Togethers
- Concentrated Weekends at ***Sarah's***

External

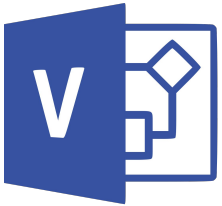
- Emails every 2-3 Weeks
- Discord for Small Updates
- Phone Calls



Documentation

- Technical Recommendation
- Architecture Diagram
- Storyboard
- Gantt Chart
- Mockups
- Meeting Minutes
- And more!

- All hosted on Github



Command Structure

- Nearly Maximum Autonomy

Tasks

- Back-End
- Front-End
  - Web Design
  - Graphic Design
- Research
- Documentation
- Secretary Work

Resource Management

- Placed everyone into their strongest positions

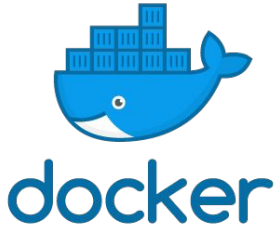
- Back-End
  - Andrew, Patrick G
- Front-End
  - Patrick C, Sarah, and Windjy

Research

- Ionic vs. React Native
- Angular
- Mapping
- Real-Time Notifications
- Graphical Assets
- The game itself!
- Service Discovery
- Microservices
- Monolithic Structures/Design
- Authentication
- Docker
- RabbitMQ

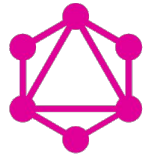
.NET
Core

Entity Framework
Core


docker

identity
SERVER

RabbitMQ



PostgreSQL

træfik

Leaflet

NGULARJS
by Google

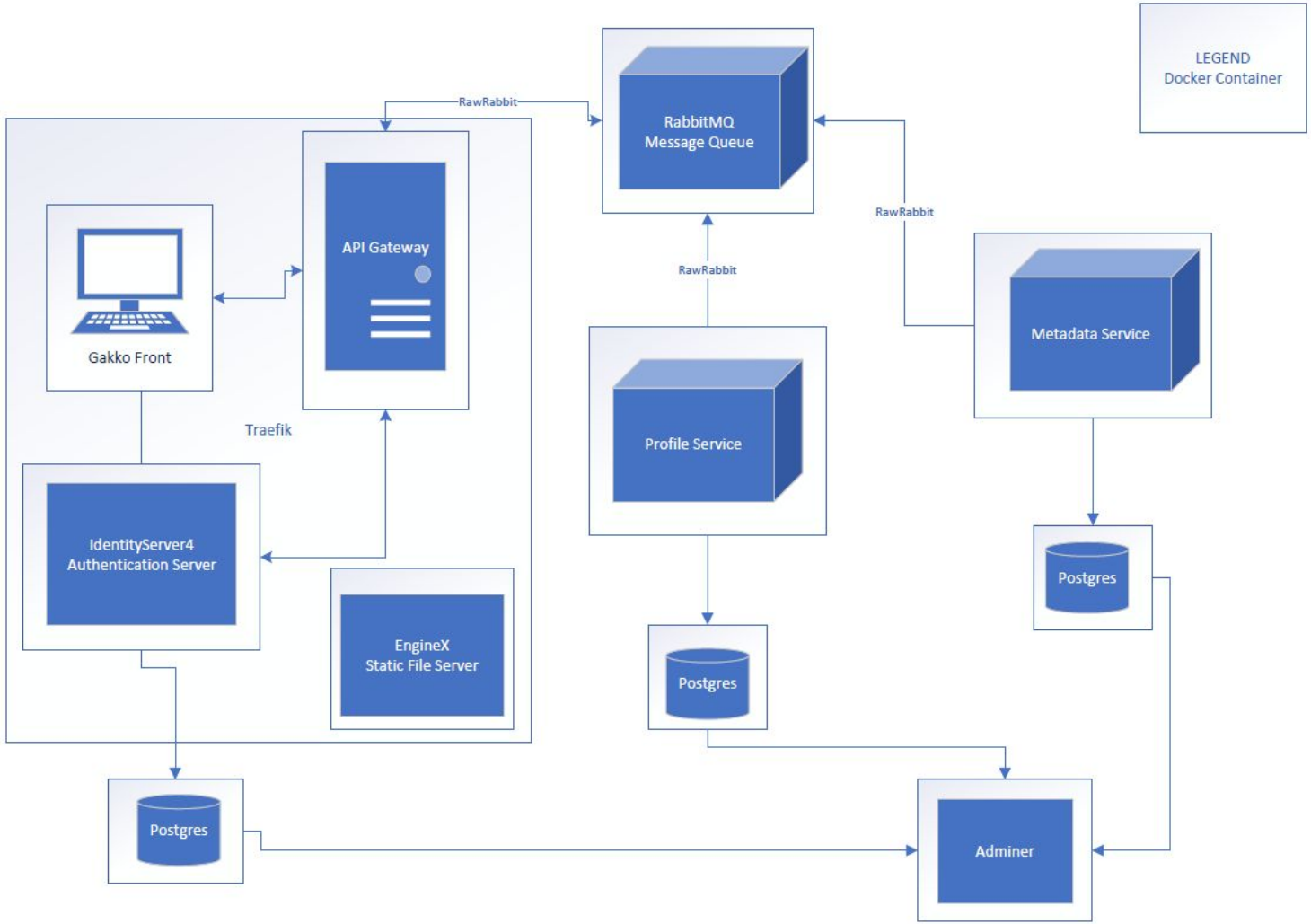
TypeScript

IONIC

Our Foundation - Backend

- C# .NET Core Microservice Based Architecture
- Docker Compose for Orchestration
- IdentityServer4 Authentication
- Entity Framework w/ Postgres
- RabbitMq/RawRabbit
- PokeAPI.co
- GraphQL
- ...and more

What does it look like?


LEGEND
Docker Container
RawRabbit
RabbitMQ
Message Queue
RawRabbit
RawRabbit
API Gateway
Gakko Front
Traefik
Metadata Service
Profile Service
IdentityServer4
Authentication Server
EngineX
Static File Server
Postgres
Postgres
Postgres
Adminer

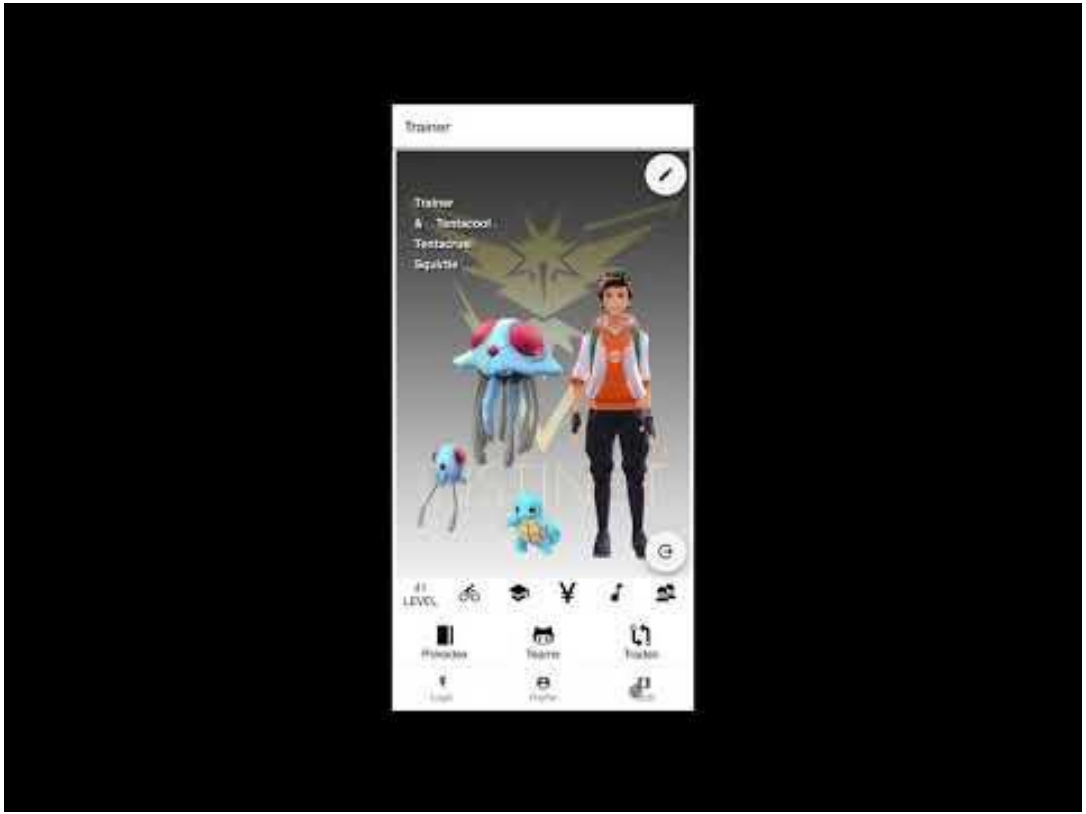
Our Foundation - Frontend

- Ionic 4 (UI Framework)
- Angular
- TypeScript
- Leaflet (Mapping)

Benefits:

- Progressive Web Application
  - Does not require coding in a device's native language (Swift for iOS, Java for Android)
  - Sacrifices some performance for ease of development and code reuse
  - Dynamic without full page loads (SPA)
- Type safety and correctness

Demo (https://www.youtube.com/watch?v=IdEQ4DichU0)

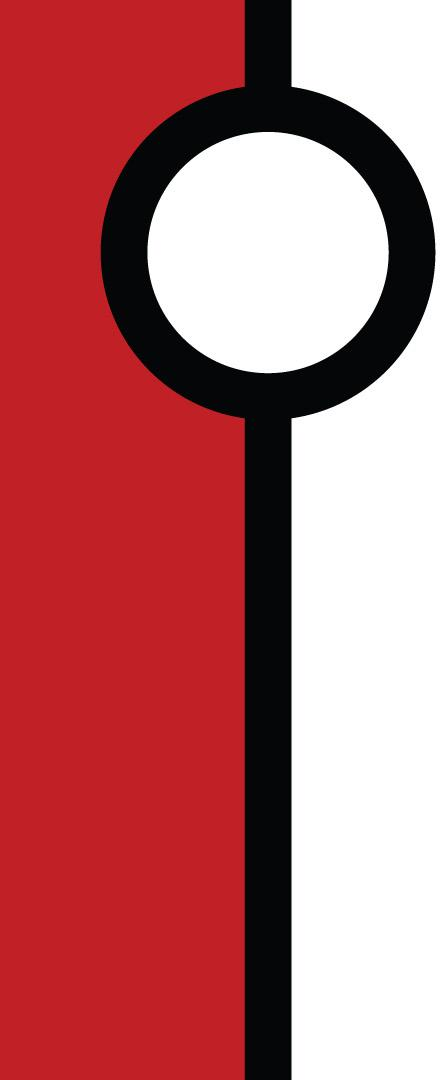


Challenges

- At the beginning of the project, we overestimated our ability, underestimated our timelines, and over promised on deliverables.
- Working with new technologies ended up being more time consuming and challenging than anticipated.
- Promised the client a demo earlier than we should.
- Missteps in communicating with the client

Takeaways and lessons learned

- Give ourselves generous estimations for time (or even overestimations)
- Consider other priorities or unforeseen delays when planning timelines.
- Spend more time upfront researching and familiarizing with newer technology before we begin any development.
- Keep consistent communication with the client, even if there is nothing tangible to update them on. Better to not keep them guessing.



Thank you

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