



Technical and Deployment Architecture Part 2

Capstone: Photo Tourist Web Application



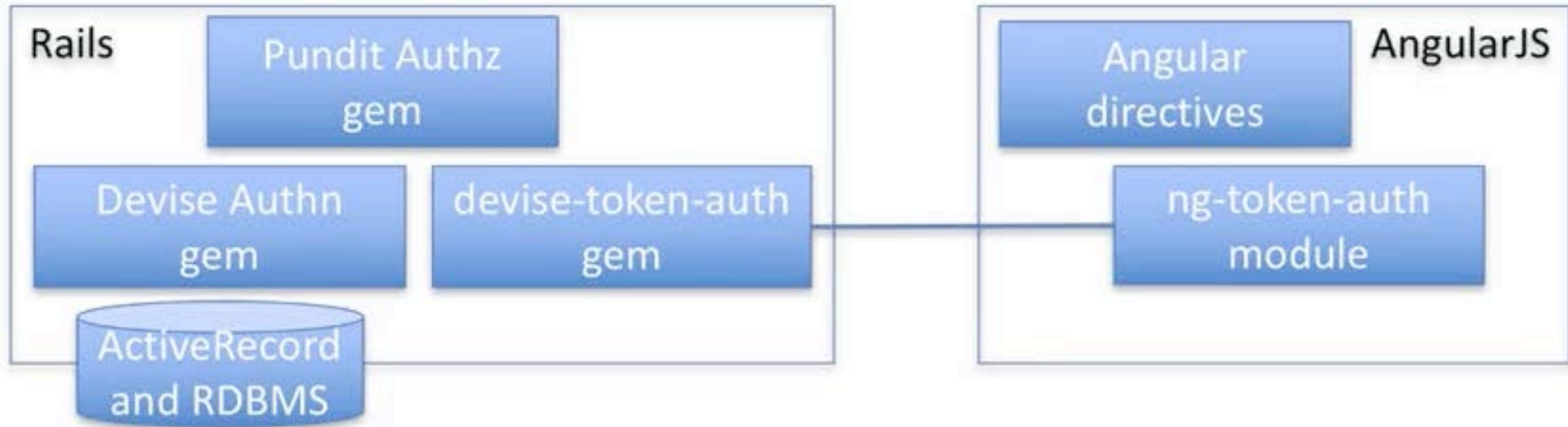
In this lecture, we will discuss...

- ✧ Technical Architecture
 - Security
 - Image Handling
 - Geocode and Geolocation queries
 - Maps
 - Communications

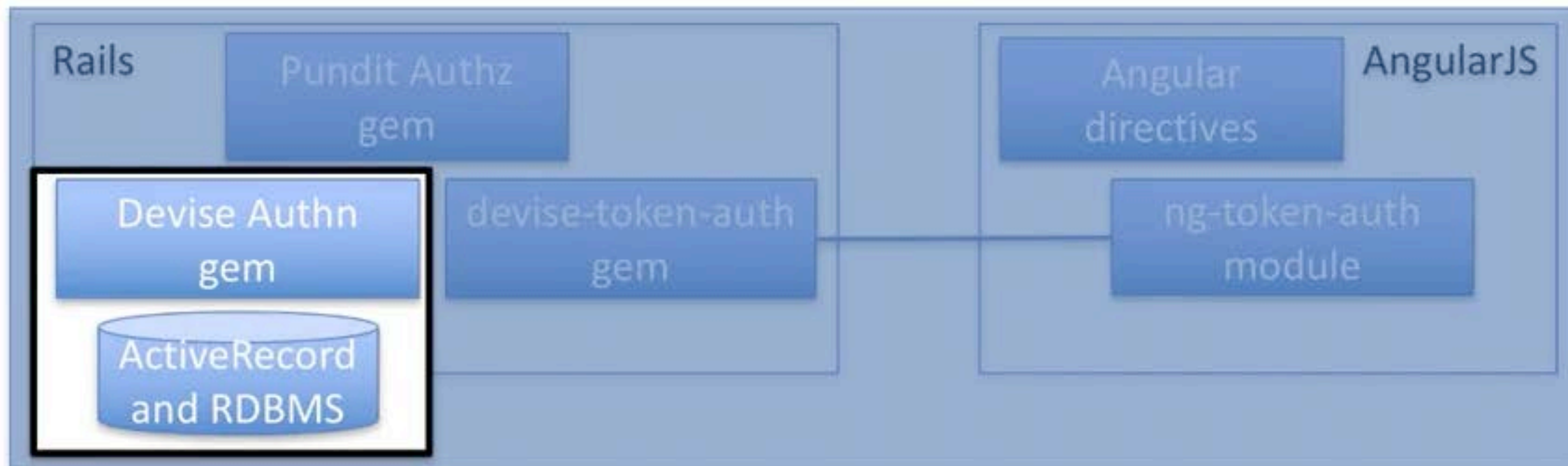
Technical Architecture



Security



Security (Core Authentication)



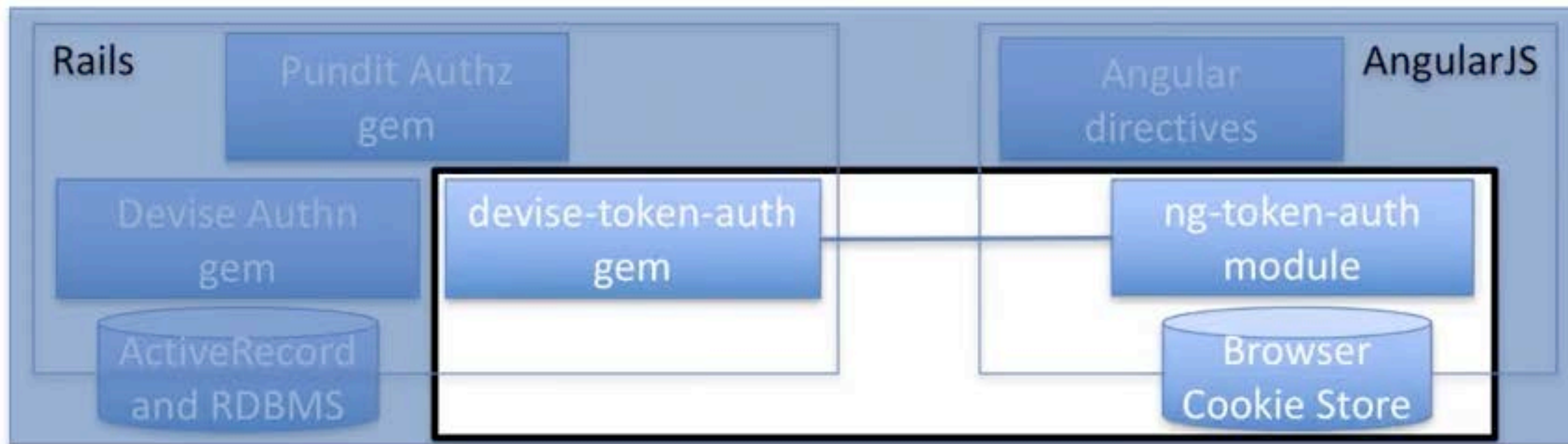
✧ Devise

- Account management
- Core Authentication

• Supports

- ActiveRecord
- Mongoid
 - Not supported by devise-token-auth

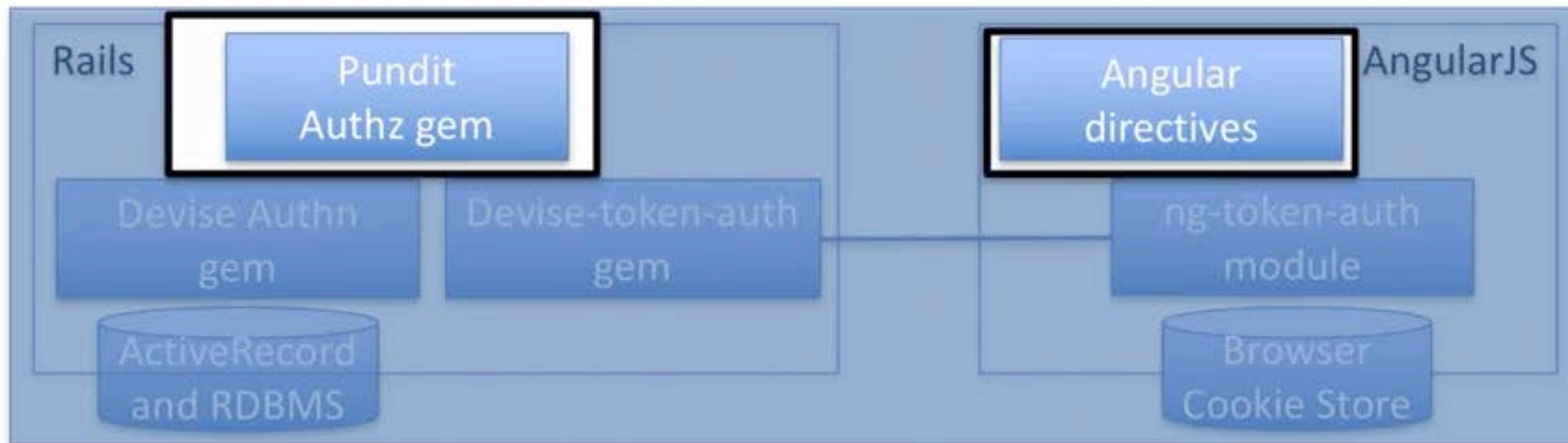
Security (WS Authentication)



- ✧ **devise-token-auth**
 - WS bearer token authentication

- ✧ **ng-token-auth**
 - client-side WS bearer token authentication
 - Integrated with devise-token-auth

Security (Authorization)



- ✧ Pundit
 - isolates authorization decisions from business logic
- ✧ Server-side redaction
- ✧ Server-side marking

- ✧ Angular directives
 - ng-if
 - ng-show
 - ng-hide

Image Handling

Rails

MiniMagick
gem

EXIFR
gem

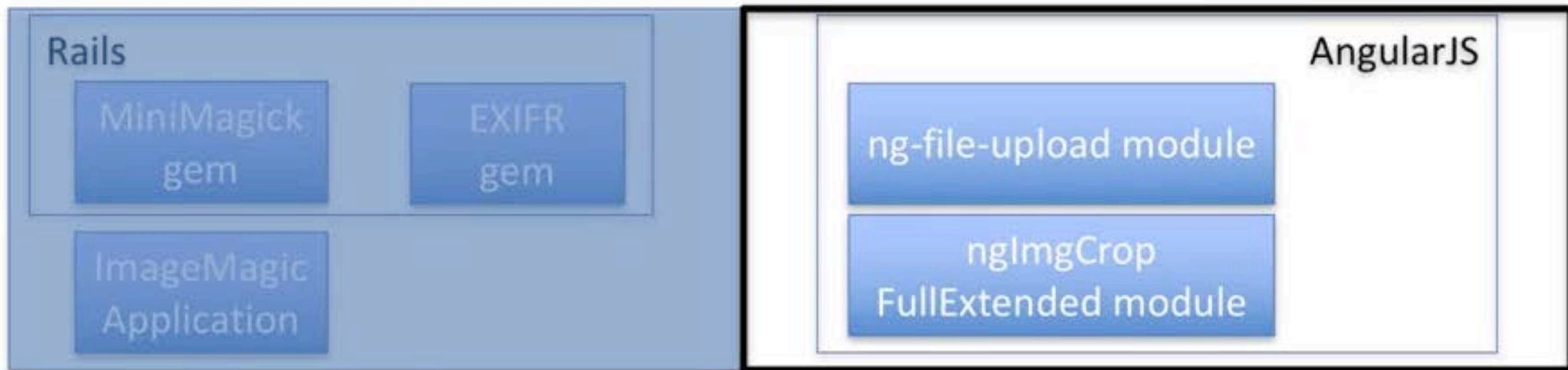
ImageMagic
Application

AngularJS

ng-file-upload module

ngImgCrop
FullExtended module

Image Handling (Web Client)



- ✧ ng-file-upload
 - Reads files from client platform

- ✧ ngImgCropFullExtended
 - Basic image cropping capability
 - Integrates with ng-file-upload
 - Fork of ng-img-crop

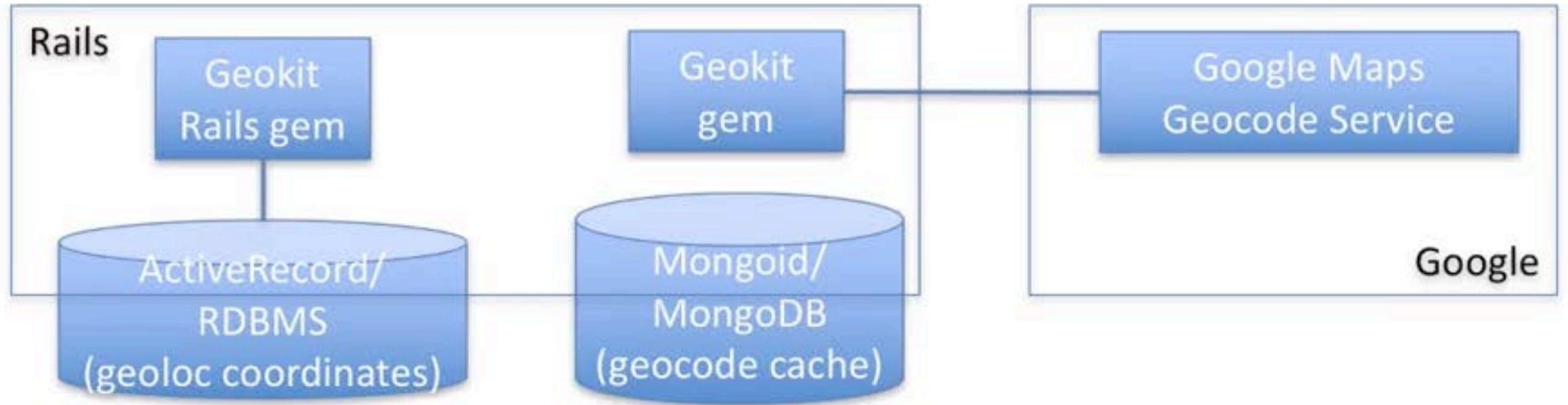
Image Handling



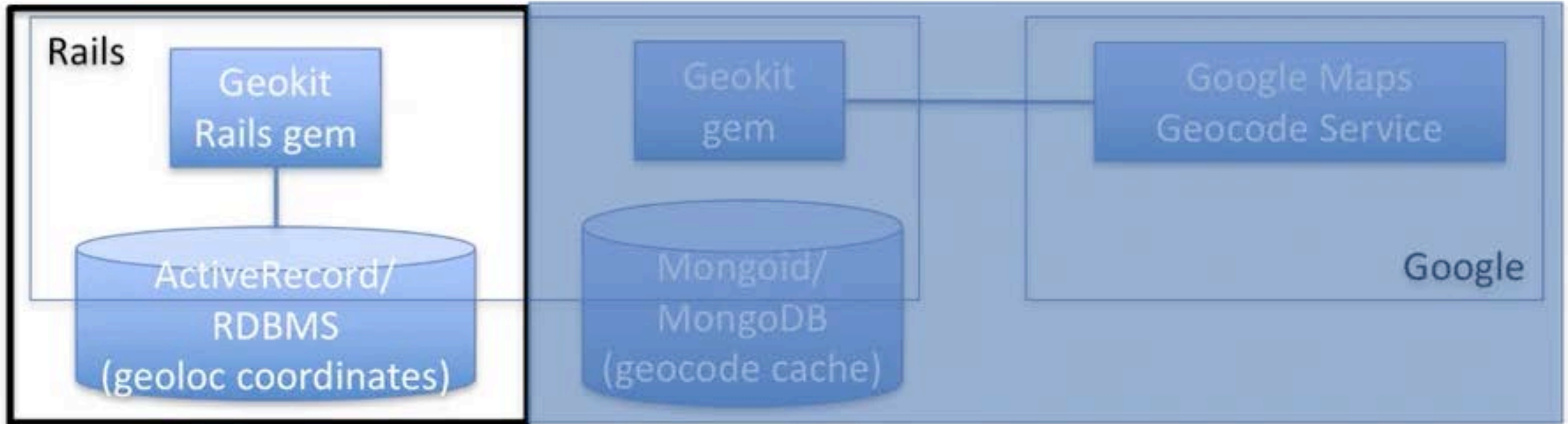
- ✧ EXIFR gem
 - Extracts EXIF, with height and width, from JPEG images

- ✧ ImageMagic Native Application
 - Manipulates images
- ✧ MiniMagic gem
 - Shell interface to ImageMagic

Geocode and Geolocation Queries



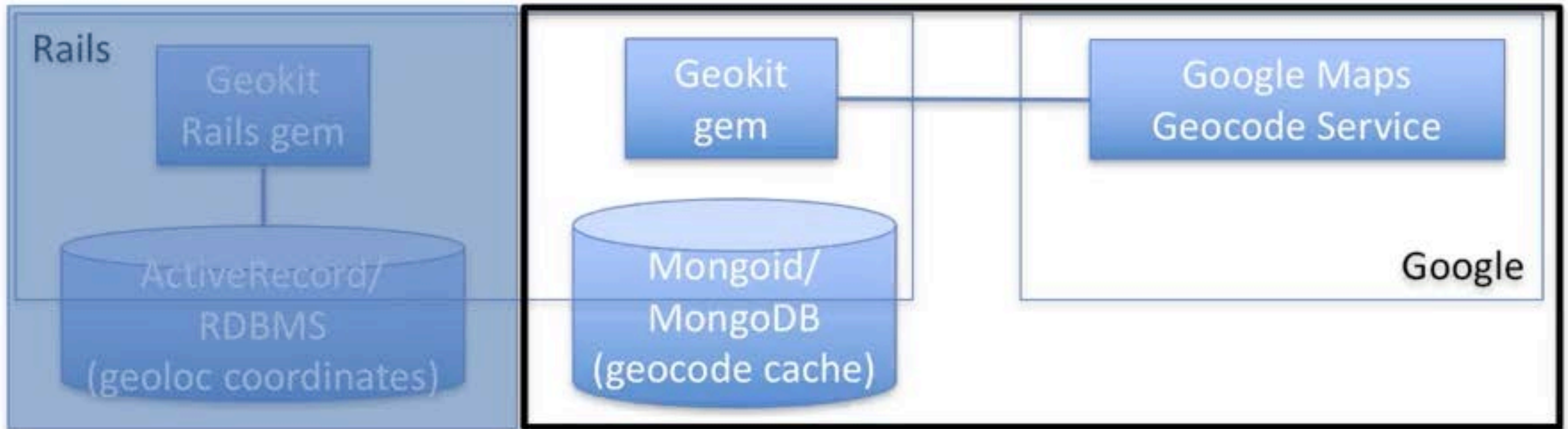
Geocode and Geolocation Queries



- ✧ Geolocation coordinates stored within RDBMS
 - MongoDB geolocation not used

- ✧ Geokit-rails
 - Provides geolocation queries for ActiveRecord-based objects

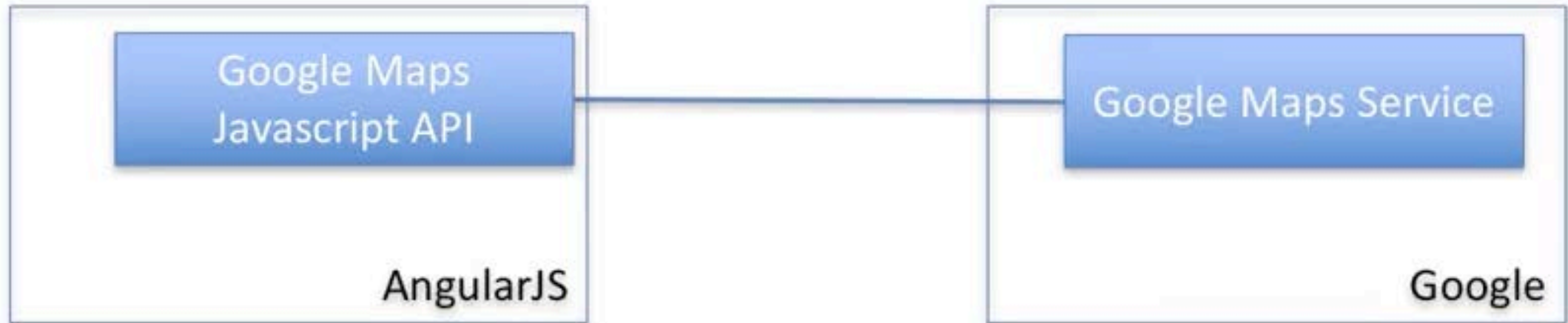
Geocode and Geolocation Queries



- ✧ Geokit gem
 - Interfaces to geocode provider

- ✧ Google Maps
 - Provides Geocode services
- ✧ MongoDB used as geocode cache

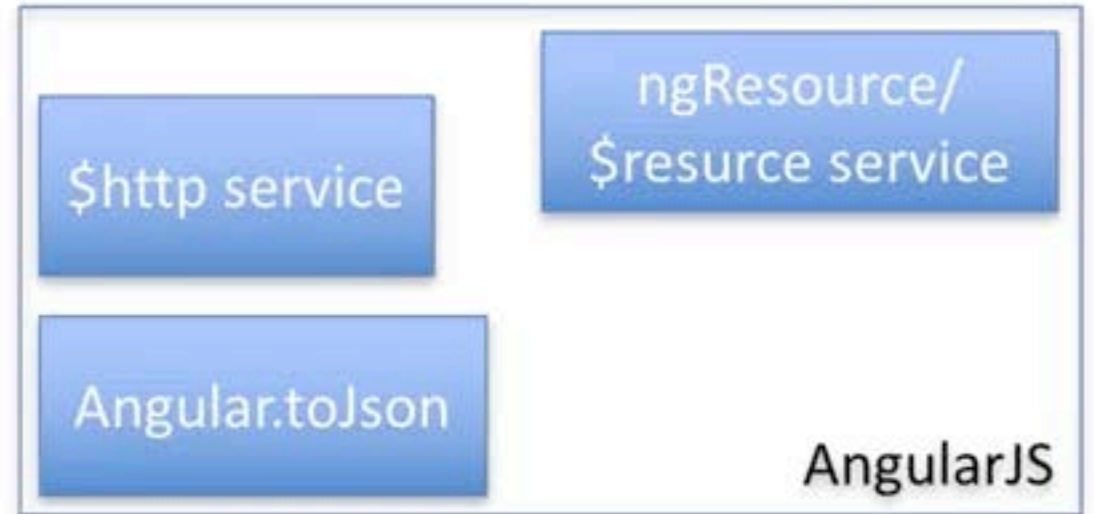
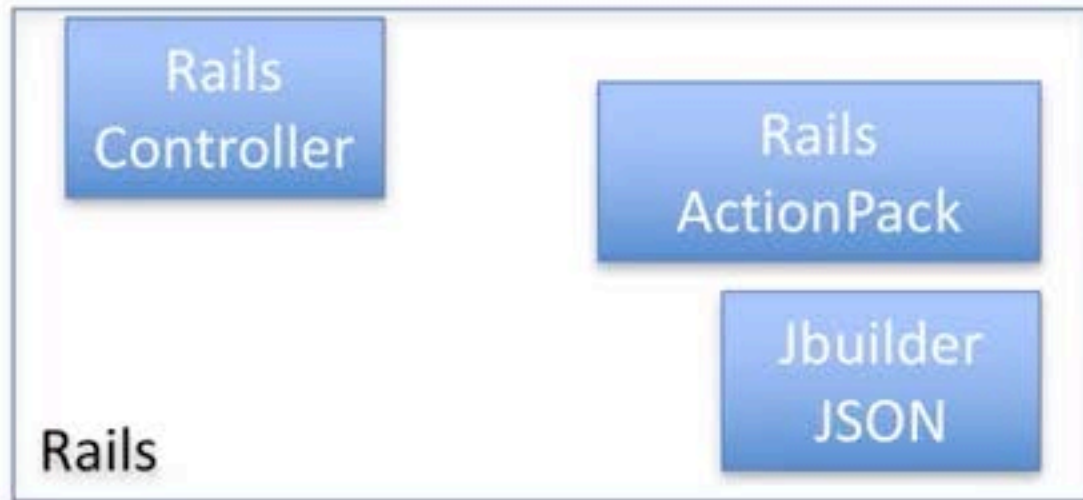
Maps



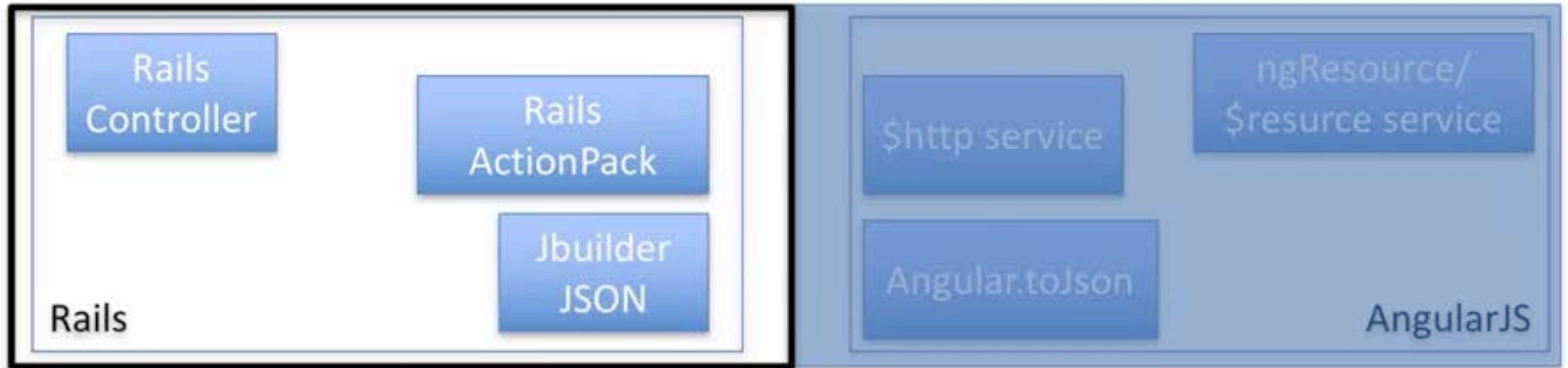
- ✧ Google Maps Javascript API
 - Displays maps, markers and other mapping features on a web page

- ✧ Google Maps Service
 - Provides displayable map data

Communications



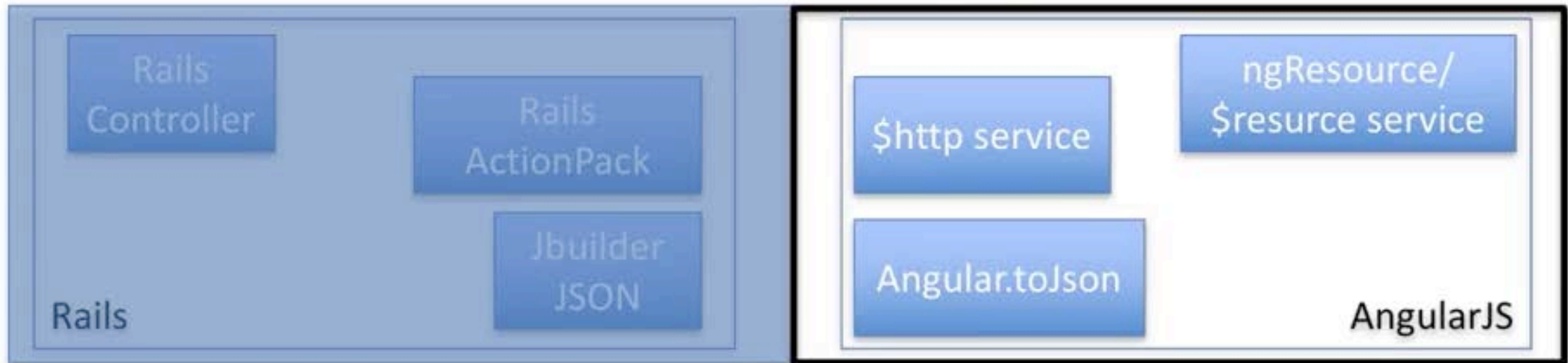
Communications



- ✧ Rails Controller
 - Provides RESTful interface to resources
- ✧ Rails ActionPack
 - From request to response

- ✧ Jbuilder JSON (View)
 - One source of JSON marshalling

Communications



- ✧ ngResource
 - Provides RESTful client to resource
 - \$resource
- ✧ \$http service
 - Provides core HTTP communications

- ✧ Angular.toJson
 - One source of JSON marshalling

Summary

- ✧ Technical Choices (5 of 7 application areas)
 - Security
 - Image Handling
 - Geocode and Geolocation queries
 - Maps
 - Communications

What's Next

- ✧ Technical Architecture Part III