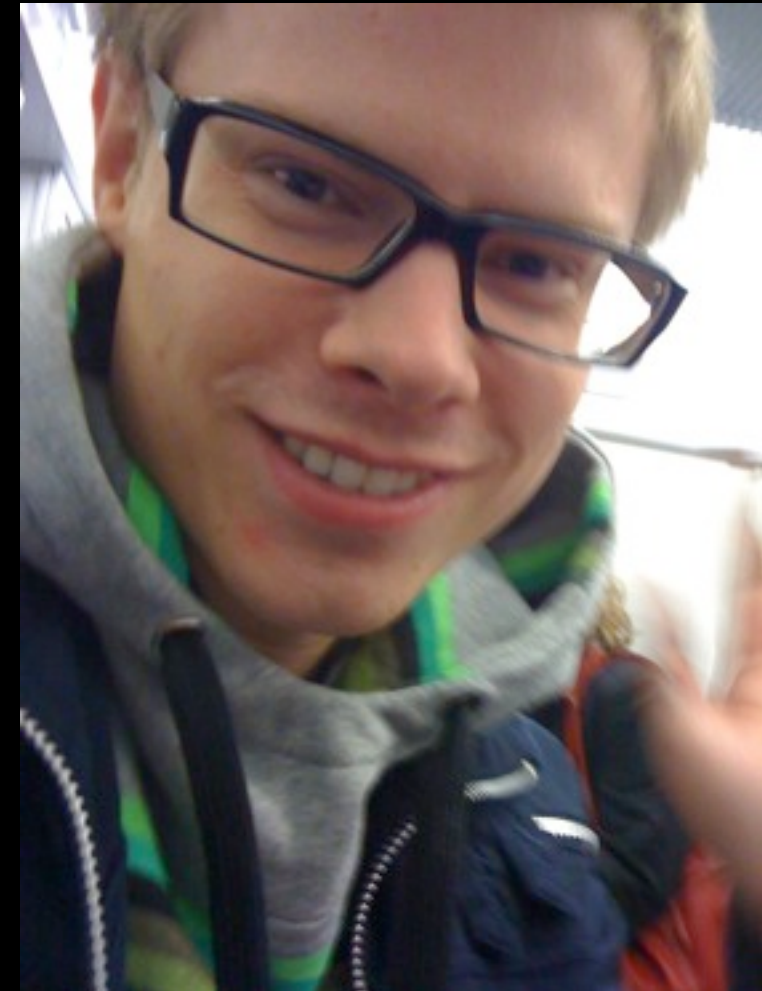# I'm from

QBRANCH:CODE

and SweGUG

Leonard Axelsson
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@xlson on twitter

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Leonard Axelsson

- Who's that?
  - System Developer @ Qbranch
  - Worked with Linux/Java hosting
  - Groovy/Grails developer since a couple of years
  - Talked @ GTUG, JFokus, SweGUG (Groovy related)
  - Backend guy...
  - Hobbies: Longboard, climbing, gaming
  - @xlson on Twitter

Groovy on Google AppEngine

Back to basics

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Presentation

- Introduction to Groovy
  - Highly customizable...
- Introduction to App Engine
- Groovy on App Engine

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Groovy

- Dynamic language running on the JVM

- Easy to learn for Java devs

  - Almost all valid Java code IS valid Groovy code

- Embeddable

Groovy Highlights

- Properties

- Closures

- Meta Object Protocol

- Grape

  - Easily getting dependencies

  - @Grab annotation

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Hello Groovy World

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What more?

- Gradle - building with groovy
- Griffon - Desktop UI
- GPars - Paralellization
- Grails - Web Development
- Spock - Spec framework
- easyb - BDD

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Google AppEngine

- "Freemium" cloud service
- Java & Python supported

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GAE Services

- User
- Mail
- URLFetcher
- Cache
- BigTable
- Image manipulation

The Java side

- Limited JVM
  - No awt
  - No threads
  - No sockets
- No writing to filesystem
- App might have to load on request
- Background jobs

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Groovy on GAE

- Supported from day one
- Grails
- Gaelyk

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Grails on GAE

- Plugins
  - AppEngine
  - GORM-JPA
    - Undocumented
- A bit to heavy-weight

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Gaelyk

- Small framework for Groovy+GAE
- Groovlets
- Groovy template servlet
- Wrappers around the services
- Small footprint
- Created by
  - Guillaume Laforge (Groovy Project Lead)
  - Marcel Overdijk

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MVC

- Model: DataStore
- View: Templates
- Controller: Groovlet

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Gaelyk wrappers

- datastore : the Datastore service

- memcache : the Memcache service

- urlFetch : the URL Fetch service

- mail : the Mail service

- images : the Images service

- users : the User service

- user : the currently logged in user (null if no user logged in)

- defaultQueue : the default queue

- queues : a map-like object with which you can access the configured queues

- xmpp : the Jabber/XMPP service.

- localMode : a boolean variable which is true when the application is running in local development mode

appengine-web.xml

```xml
<appengine-web-app xmlns="http://appengine.google.com/ns/1.0">
<!-- Your application ID -->
<application>myappid</application>
<!-- The current version of your deployed application -->
<version>1</version>

<!-- Exclude Groovlets and templates from the static files -->
<!-- to let App Engine know these files are not just mere resources -->
<static-files>
<exclude path="/WEB-INF/**.groovy" />
<exclude path="**.gtpl" />
</static-files>
</appengine-web-app>
```

Gaelyk Demo

Tooling

- SpringSource Tool Suite
- AppEngine Eclipse Plugin
- Groovy 1.7
- Gaelyk 0.3.2

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Gotcha's

- App might have to load on request
  - 500:s sadly are common
- The JVM blacklist is trouble
  - Examples
    - Spring fileupload doesn't work (writes to disk)
    - jcaptcha doesnt work as theres no awt
- Next to no unit testing support
- You can't trust the dev server
- Add ignores to <u>web.xml</u> or appengine will think your groovlets and templates are static files
- Putting a POGO in memcache just didn't work, POJO did

The Good

- Leveraging googles hardware
- No need for account management
  - uses the google accounts
- It's cheap and it scales
  - Disclaimer: might not be cheap when it scales

Resources

- Gaelyk
  - http://gaelyk.appspot.com/
- Will it play on App Engine
  - http://groups.google.com/group/google-appengine-java/web/will-it-play-in-app-engine
- Introduction to Gaelyk
  - https://www.ibm.com/developerworks/java/library/j-javadev2-6/
- QBRANCH:CODE Blog
  - http://code.qbranch.se/
- SweGUG (Swedish Groovy User Group)
  - http://groups.google.com/group/swegug
- Groovy Tips and Trix
  - http://mrhaki.blogspot.com/

SweGUG

- Swedish Groovy User Group

  - http://groups.google.com/group/swegug

- Previous meetings:

  - Groovy on Google AppEngine

  - DSL for importing Excel data

- In the pipe?

  - Workshop Day

  - How to create your own Grails plugins

- What do you want to see?