

Facebook apps in Python

PyCon UK 2008.
Birmingham,
12-14 Sept.

Kevin Noonan,
Calbane Ltd.

Agenda

- i introduction
- ii the anatomy of a Facebook application
- iii FBML (Facebook markup language)
- iv FBJS (Javascript for Facebook)
- v selected Facebook API calls
- vi options for hosting & scaling
- vii Facebook demographics & successful apps
- viii wrapping up

facebook®

The basics of Facebook apps

- a Facebook app is a web-application
- you must have hosting for your web app
- An app has several “integration points” with Facebook
- An app calls Facebook's API to use features of Facebook
- Facebook permits revenue generation through advertising or other means



Facebook Platform Launch, sixteen months ago

Photo credit: Mark Jen (<http://www.flickr.com/photos/99zeros/>)



Connect and share with friends

"Facebook Connect" is in beta

Social network: a convergence of technology memes

- a personal home/profile page (like say, Geocities)
- a portal (like “Yahoo”)
- a “universal” login (like AOL Screenname / OpenID / Windows Live ID)
- a walled garden (like old AOL/CompuServe/NTT DoCoMo)
- an API providing a platform for development

The “Social Graph”: the heart of a social network

- The Social Graph is the set of connections among users
- This feature distinguishes social networks from the web portals of the nineties
- Connections are significant because they can convey real social meaning
- Connections convey trust, reputation and a willingness to share data
- And users value the opinions of *their* social network

Approaches to Facebook app development

- develop an application especially for a segment of the Facebook userbase
- customise a standalone website to give it a “social face”: i.e. create a Facebook app interface to some or all of it
- Use Facebook Connect to give users Facebook logins on your site; & data-sharing with their Facebook friends.
- Do a desktop or mobile app (integrating with Facebook)

If you're short of motivation...



Entry for the current round is closed
\$25K grants will be awarded to 25 selected applications.
Later an additional \$250K for the top 5 of the selected group.

Look out for the following round of funding:
<http://developers.facebook.com/fbFund.php>

Faceless Facebook apps & other rules of play

It's forbidden to use the word “face” in an app's name...

...among other rules of Facebook app development:

http://developers.facebook.com/user_terms.php

And the terms & conditions for the regular user still apply:

<http://www.facebook.com/terms.php>

Supported languages for Facebook apps

- ActionScript
- ASP.NET
- ASP (VBScript)
- Cocoa
- ColdFusion
- C++
- C#
- D
- Emacs
- Lisp
- Erlang
- Java
- JavaScript
- Perl
- PHP
- Python
- Ruby on Rails
- Windows Mobile ...

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Facebook Pete Bratac Friends Applications Inbox (4) Home Search

B-) Smiley

Home

My Smilies


New Smiley

Send Smiley

Welcome to Smiley!

Smiley is a sample app created demonstrate the many platform integration points of the Facebook profile.

Here is an button for adding a box to your profile. This will go away if you add the box:

Add to Profile

Here is an button for adding an info section to your profile. This will go away if you add the section:

These are FBML tags that can prompt users for extended permissions from the canvas page.
These will go away if you grant these permissions:
Enable Email
Enable Permanent Login

Upon submitting the form below, you will be prompted to grant email permissions (unless you've already done so for this app):

How often would you like to be notified of new smilies?

Notify Me

Canvas page

Facebook
Home
Friends
Applications
Marketplace
Groups
Search

Application Directory

Search Applications

Apps You May Like
Most Activity
Most Active Users
Newest



Facebook® for BlackBerry® smartphones
 By Research In Motion, Ltd.
 Facebook® for BlackBerry® smartphones provides automatic, wireless access to Facebook services – status updates, photo uploads, messaging, pokes and event invitations – for free!
 353,369 daily active users (24%) — 160 friends — 126 reviews



Facebook for iPhone
 By Joe Hewitt
 197,857 daily active users (47%) — 51 friends — 3 reviews

Applications by Language:

English

Browse Applications:

For Facebook Profiles

All
Alerts
Business
Chat
Classified

Application Directory

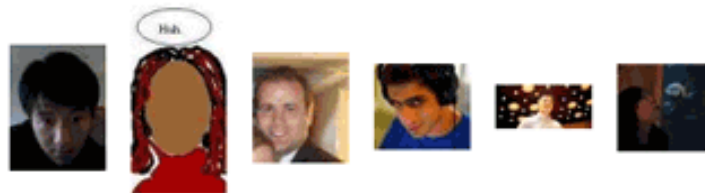
B-) Smiley

[Browse More Applications](#)

Facebook is providing links to these applications as a courtesy, and makes no representations regarding the applications or any information related to them. Any questions regarding an application should be directed to the developer.

▼ Friends Who Have Added this Application

23 friends have added this application

[See All](#)

James Wang

Ami Vora



Eric Zamore

Benjamin Ling

Julie Zhuo

▼ Discussion Board

There are no discussions.
[Start the first topic.](#)

▼ Reviews

[Write Review](#) | [See All](#)

▼ The Wall

Displaying all 5 wall posts

[See All](#)**You are already using Smiley.**

- [Go to this Application](#)
- [Remove this Application](#)

This application cannot be added to some of your Pages. [Learn more.](#)

[Become a Fan](#)[Add to my Page's Favorites](#)[Block Application](#)[View Insights](#)[Share](#) +**About this Application**

Users:

7 daily active users

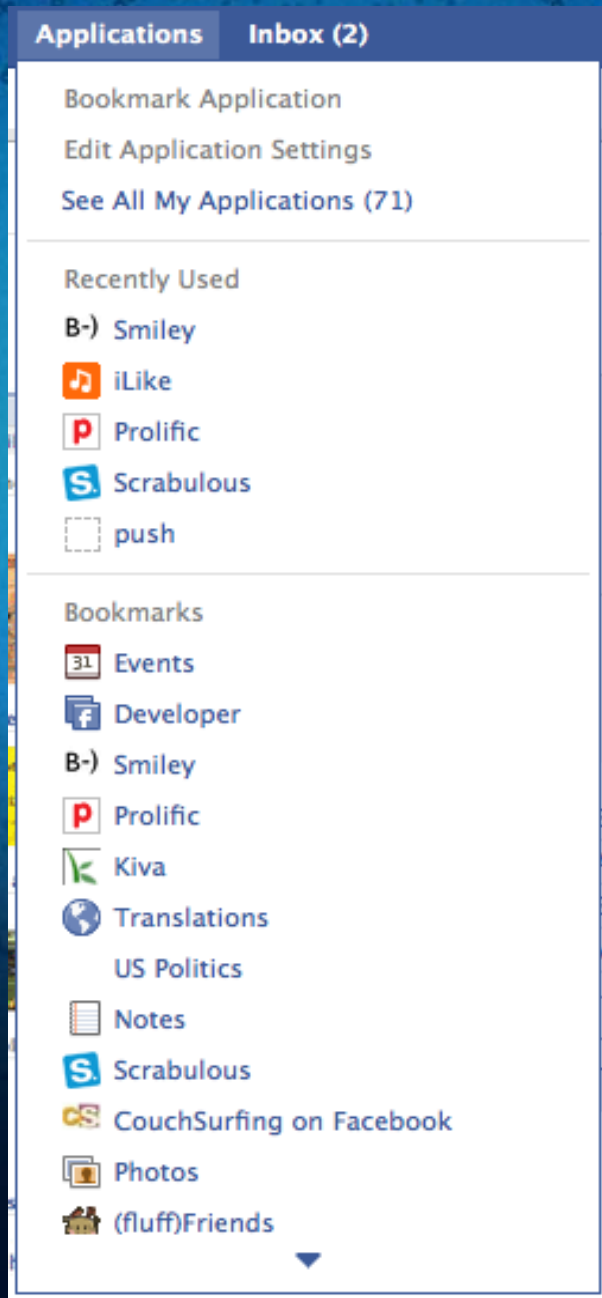
1% of total, 23 friends

This application was not developed by Facebook.

About the Developer

Sasha Rush

About page



Applications menu

Status

[see all](#)

Pete is, like, working.

on Monday [edit](#)

Bookmarks

[see all](#)

Events



Developer



B-) Smiley



Prolific



Kiva



Translations


US Politics



Notes

Bookmarks


facebook Pete Bratach Friends Applications Inbox (2) Home Search


 **Pete Bratach** is, like, working. on Monday edit


Wall Info Photos Boxes **Smilies** Causes >> +

Pete's Smilies

We are pleased to announce that Pete Bratach has been feeling:


Happy


Happy


Happy

Application tab

facebook
Pete Bratach
Friends
Applications
Inbox (2)
Home
Search



Pete Bratach is, like, working. on Monday edit

Wall
Info
Photos
Boxes
Smilies
Causes
>> +

Update Status
Write Note
Add Photos
Add Video
Add Music / Video

What are you doing right now?
Pete is
Post

Today
All Posts
Posts by Pete
Posts by Others

Pete Bratach wants to see Calexico at Fillmore in San Francisco. 1:28pm Comment

Pete Bratach iLike'd a music video. 1:21pm


Pete Bratach added the music video Fake Empire by The National to his Videos iLike.

Add Comment

Pete Bratach wants to see "The Dark Knight". 1:14pm


Me too! Pete: "9:45 tonight!" The Dark Knight Reviews | Watch the trailer

Add Comment

Pete wants to see a movie... 1:13pm Comment

Pete changed his profile picture. 1:09pm Comment

Yesterday


wrote at 11:03pm
Thanks Pete! You'll have to come over and meet him one of these days :)

Wall-to-Wall

Pete wrote on wall. 10:10pm

Pete plans to attend Tony's Birthday Jig. 6:45pm Comment

Pete is now friends with . 6:44pm Comment

July 15


wrote at 7:04pm
hey pete! i'm new to this facebook thingy, but i guess you're not... yeah, the kids are getting huge. ila's a real talker, which is no surprise given her dad's tendencies in that department. what's new in your world? i haven't talked to you in ages!

Wall-to-Wall

Pete is now friends with Zhen Fang, Kelly Winters and . 4:01pm Comment

July 14

Pete is now friends with Naomi Gleit. 11:11pm Comment

Pete wrote on Sivan's wall. 10:25pm

Pete is now friends with . 9:58pm Comment

Pete wrote on Christina Holsberry's wall. 2:00pm

Pete is, like, working. 11:01am Comment

Pete is now friends with . 5:24am Comment

July 13

Pete commented on photo. 11:56pm

And how was this not a drunk table? :))

View Photos of Me (65)
View Videos of Me (3)
View My Friends (361)

Boo.

Networks:
Facebook
San Francisco, CA
Birthday:
April 21

Friends
361 friends See All





Dave Fetterman Mike Murphy





Tish Stenson

Networks with the most friends
Facebook (168)
San Francisco, CA (128)
Silicon Valley, CA (92)
Stanford (48)

Networks you belong to
Facebook (168)
San Francisco, CA (128)
Show All Networks | See All Friends

Smiley

We are pleased to announce that Pete Bratach is feeling:

Happy

Visit Smiley

Profile box

Personal Information

Interests: jazz, frisbee, california,
Favorite Music: John Coltrane, Joanna Newsom
Favorite Quotes: We have to take the car, because the bike's on fire – Los Campesinos

Education and Work

College: Harvard '07
Computer Science
High School: Cheltenham High School '03
Employer: Facebook
Position: ???

My Smilies

Good Smilies:



Happy

The original and still undefeated.



Indifferent

meh...



Sad

Oh my god! you killed my dog!




Cool

Yeah. whatever

Application info section

facebook
Pete Bratach
Friends
Applications
Inbox (2)
Home
Search



View Photos of Me (65)
View Videos of Me (3)
View My Friends (361)

Boo.

Networks:
Facebook
San Francisco, CA
Birthday:
April 21

Pete Bratach is, like, working. on Monday edit

Wall
Info
Photos
Boxes
Smilies
Causes
>> +

Update Status
Write Note
Add Photos
Add Video
B-) Smile!

:)	:	:(B-
//.- Emo	=O	XD	: [

Post

Publisher



Welcome, Pete

(logout)



Add Photos



Add Video



Share Link



Write Note

News Feed

Top Stories

Status Updates

Photos

Posted Items

All Stories



added new photos.



impromptu baja road trip – 8 photos



Naomi Gleit, James Wang and Itamar Rosenn were tagged in an album.

wonder internet

I find the new Captchas strangely fascinating



Blaise A. DiPersia recorded new videos.



Jul 20, 2008 1:04pm

by Blaise A. DiPersia

0:12 Recorded 2 hours ago

News Feed

Requests



84 friend requests



1 event invitation



1 mob wars
invitation



22 other requests

Updates



28 new updates

Requests

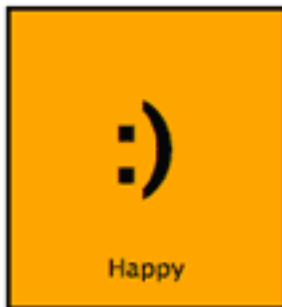


Pete Bratach is, like, working. on Monday edit

[Wall](#)[Info](#)[Photos](#)[Boxes](#)[Smilies](#)[Causes](#)[»](#)[+](#)

Smiley

We are pleased to announce that Pete Bratach is feeling:

[Visit Smiley](#)

Dogbook

Profile Box Control Panel



Paddington

Growing Gifts

Showing 4 of 4 flowers. [See All](#)

[Manage Your Growing Gifts](#)

Boxes tab

B-) Smiley

Home

My Smilies

New Smiley

Send Smiley

Send a friend a smiley

Ruchi Sanghvi x

:-*

Kiss

;]

Wink

:@

Confused

:'-)

Tear

:P

Tongue

:-K

Bite

Send Smiley

Feed form

facebook

Pete Bratach

Friends

Applications

Inbox (2)



US Politics

[Home](#)

[Election Pulse](#)

[Debate Groups](#)

[Latest News](#)

User Dashboard

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Basics of FBML - Facebook Markup Language

- FBML is based on HTML (with extra tags added)
- The alternative to FBML is to use HTML in an iframe--in your app's canvas page
- The profile.setFBML API call puts content in the app's profile box
- **fb:profilepic** inserts a profile picture in the page
- **fb:name** includes the user's name in the text
- **fb:if-is-friends-with-viewer** shows logic is supported too

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Basics of FBJS: Facebook Javascript

- Syntax is the same as Javascript
- Facebook parses and rewrites your code
- In profile boxes, inline scripts are deferred until the first mouse-click
- DOM (Document Object Model) calls have been renamed:
 parentNode changed to **getParentNode**,
 nextSibling changed to **getNextSibling**, etc.
- **obj.setStyle('width', '340px')** to change CSS style
- **innerHTML** isn't defined
- **AJAX** is supported
- There's a library for animation

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Sample code with minifb module (I)

```
import minifb
_FbApiKey = "xxxyyyzzz..."
_FbSecret =
minifb.FacebookSecret("aaabbbccc...")

def ModPythonHandler(request):
    '''FBML Canvas page receives session info
    from POST'''
    arguments = minifb.validate(_FbSecret,
request.read())
    if arguments["added"] != "1":
        return ServeIndexNonmember()
    else:
        session_key = arguments["session_key"]
        uid = arguments["user"]
        return ServeIndex(uid, session_key)
```

```
def UserAdded(request):
    '''Facebook callback when user has added application'''
    # Parse and validate posted values
    arguments = minifb.validate(_FbSecret, request.read())
    auth_token = arguments["auth_token"]

    # Request session_key from auth_token
    result = minifb.call("facebook.auth.getSession",
                        _FbApiKey, _FbSecret, auth_token=auth_token)
    uid = result["uid"]
    session_key = result["session_key"]

    # Lookup username and details
    usersInfo = minifb.call("facebook.users.getInfo",
                        _FbApiKey, _FbSecret, session_key=session_key,
                        call_id=True, fields="name,pic_square",
                        uids=uid) # uids can be comma separated list
    name = usersInfo[0]["name"]
    photo = usersInfo[0]["pic_square"]

    AddUserToDatabase(uid, name, photo)

    # Set the users profile FBML
    fbml = "<p>Welcome, new user, <b>%s</b></p>" % name
    minifb.call("facebook.profile.setFBML",
                _FbApiKey, _FbSecret, session_key=session_key,
                call_id=True, uid=uid, markup=fbml)
```


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Prepare for the worst case scaling scenario...

Google™
App Engine



Free Accelerator for **facebook** developers

Sign Up Now

We have partnered with
◆ *Sun* to provide scalable,
on-demand infrastructure
to **facebook** developers.



Free Accelerator™ for one year

◆ Joyent has partnered with ◆ *Sun* microsystems
to provide scalable, on-demand infrastructure
to **facebook** developers.

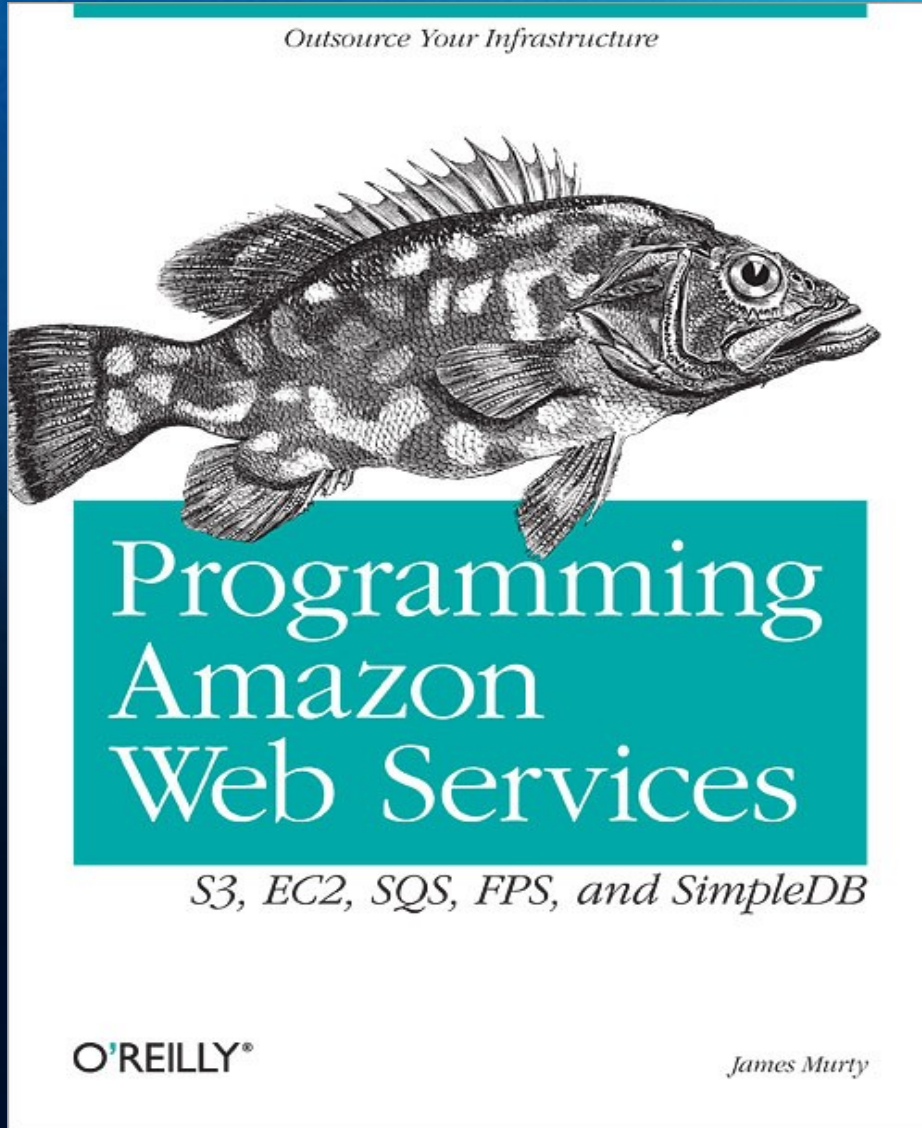
Joyent



AWS for abstracted processing & storage etc.

- S3 - Simple Storage Service
- EC2 - Elastic Compute Cloud
- SimpleDB
- SQS - Simple Queue Service
- FPS - Flexible Payment Service
- DevPay
- Mechanical Turk
- "Amazon Associates"
- ...

A recommended book on AWS

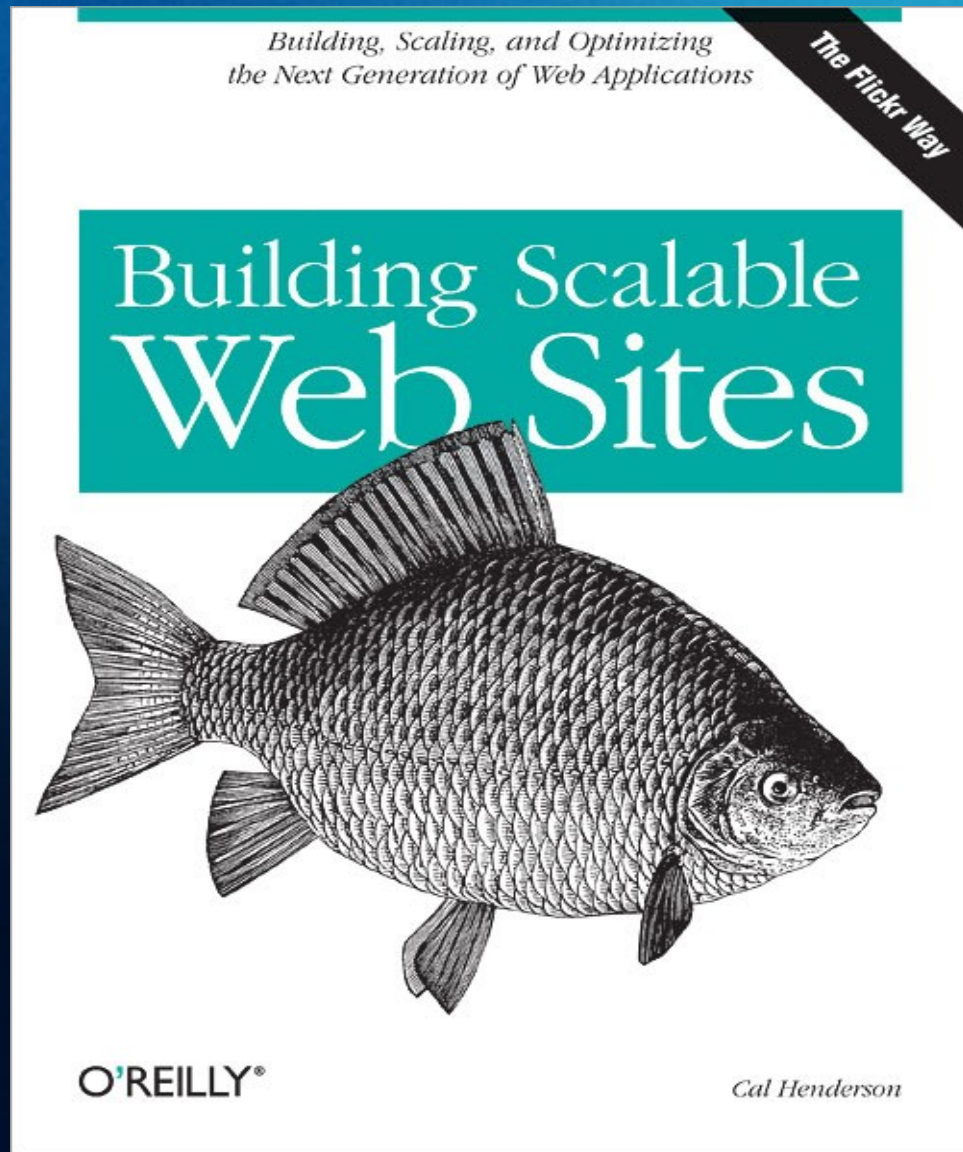


Programming Amazon Web Services S3, EC2, SQS, FPS, and SimpleDB

by James Murty

<http://oreilly.com>

A recommended book on scaling



Building Scalable Web Sites

Building, scaling, and optimizing the next generation of web applications

By Cal Henderson

<http://oreilly.com>

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Facebook demographics

75 million users (May 2008)

61% of users are in three countries:

- USA 35%
- UK 14%
- Canada 12%

Over 80% of the global userbase is under 35 year-of-age

50% of the userbase is between 18 and 25

Tips for a successful Facebook app

stand out from the crowd (of over 30K apps)

keeping Facebook's demographics in mind, target a segment of the audience—e.g. teenage girl gamers

register a domain-name identical to the name of your app

if you don't plan for scale, you're planning to fail

create a marketing plan (get help from a marketing pro)

play by Facebook's rules: on its platform, Facebook is god

build in virality (without spamming users)

pick a catchy name & communicate clearly the app's benefits

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For an additional potential audience of 80m...

“Porting your facebook apps to Bebo”
(by Blake Commagere)

<http://dev.aol.com/article/2008/porting-your-facebook-app-to-bebo>



Google's open standard for social network apps, based on Google Gadgets.

Google has marshalled an alliance of social networks, against Facebook:

Hi5, Friendster, Ning, Salesforce.com, Plaxo, Orkut, Bebo, LinkedIn...

And many of the most successful Facebook developers have ported their apps:

RockYou, Slide, Flixter, iLike...

Bookmarks

Facebook developer documentation

http://wiki.developers.facebook.com/index.php/Main_Page

MiniFb project site

<http://code.google.com/p/minifb/>

Tutorial for MiniFB

<http://keepnix.com/articles/hellominifb.html>

PyFacebook project site

<http://code.google.com/p/pyfacebook/>

Tutorial for PyFacebook

<http://wiki.developers.facebook.com/index.php/PythonPyFacebookTutorial>

Facebook faces the free press

"Inside Facebook"

<http://www.insidefacebook.com/>

"All Facebook"

<http://www.allfacebook.com>

"Face Reviews"

<http://www.facereviews.com/>

Recommended Books I

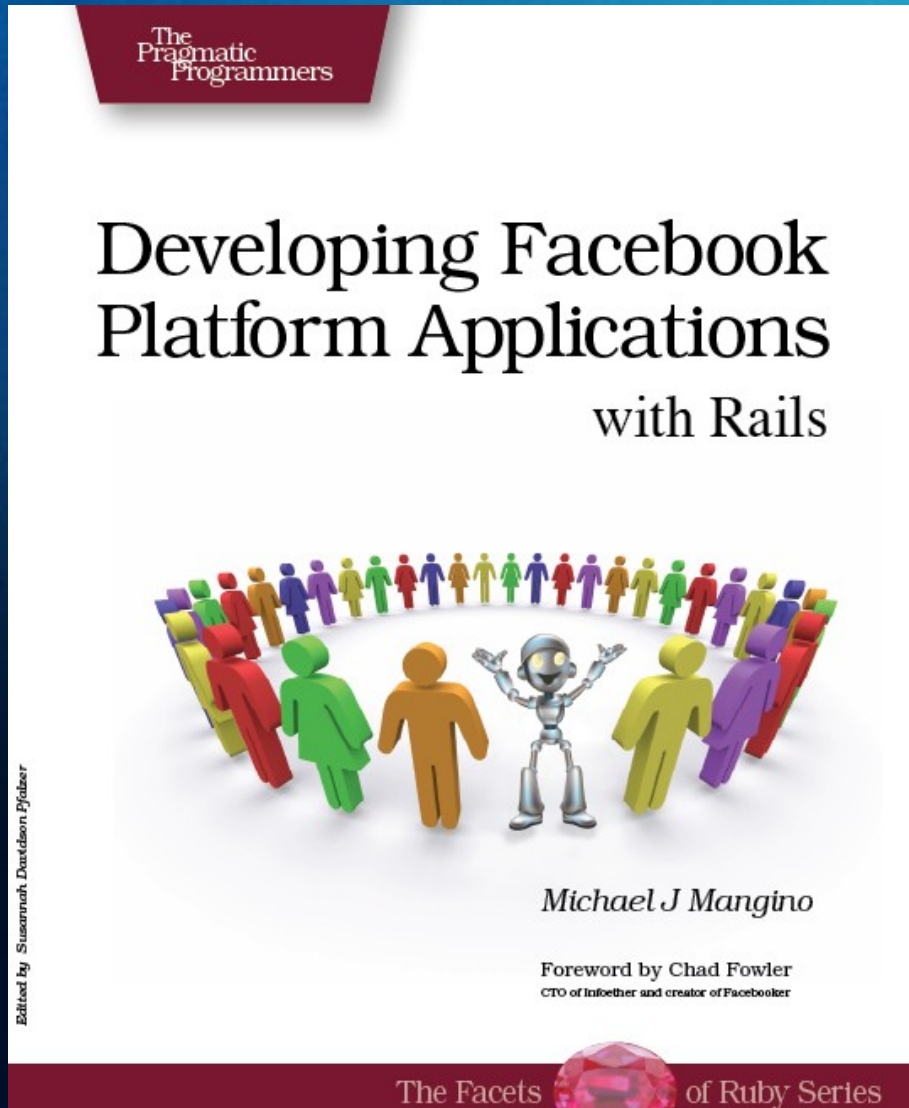


FBML Essentials

By Jesse Stay

<http://oreilly.com>

Recommended Books II



Developing Facebook Platform Applications with Rails

by Michael J. Mangino

<http://www.pragprog.com>

Recommended Books III



Facebook Cookbook Build Your Facebook Empire

By Jay Goldman

Not yet published.
Due: Oct 2008 (est.)

<http://oreilly.com>

Any questions?

Speaker: Kevin Noonan, Calbane Ltd.

mailbox@calbane.com