

# Building Your Own Web Analytics Dashboard

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Confoo 2016

# Presentation Overview

- Introduction (4 min)
- Part 1: Flask + Bootstrap (10 min)
- Part 2: HighCharts API & D3 (10 min)
- Part 3: Heroku, Database, APIs, others (15 min)
- Conclusion (1 min)
- Q & A (5 min)

# About Me

- R & D at Montreal Neurological Institute (Neuroscience)
- Startups
  - Busbud (Travel)
  - Frank & Oak (Retail)
  - Sharethebus (Travel)
- Research
  - Polytechnique (Astrophysics)
  - McGill (AI)
  - MIT (Energy)
- Confoo 2014!
  - <https://github.com/stronnics/confoo-2014>

# Introduction

- High in Demand right now:
  - **Data Science**
  - **Business Intelligence (BI)**
  - **Data Visualization**
- The quest for Data-Driven Dashboards:
  - Microsoft Excel - Still very important
  - Tableau Software - <http://www.tableau.com/>
  - TIBCO Spotfire - <http://spotfire.tibco.com/>
  - Looker - <http://www.looker.com/>
  - Mixpanel - <https://mixpanel.com/>

**Can We Build Our Own?**

# **Part 1: Flask + Bootstrap**

# Introduction to Flask

- Best tutorial on the web is Miguel Grinberg's Mega Flask Tutorial
  - <http://blog.miguelgrinberg.com/post/the-flask-mega-tutorial-part-i-hello-world>

Rapid Prototyping + Lightweight + Simple

# Bootstrap

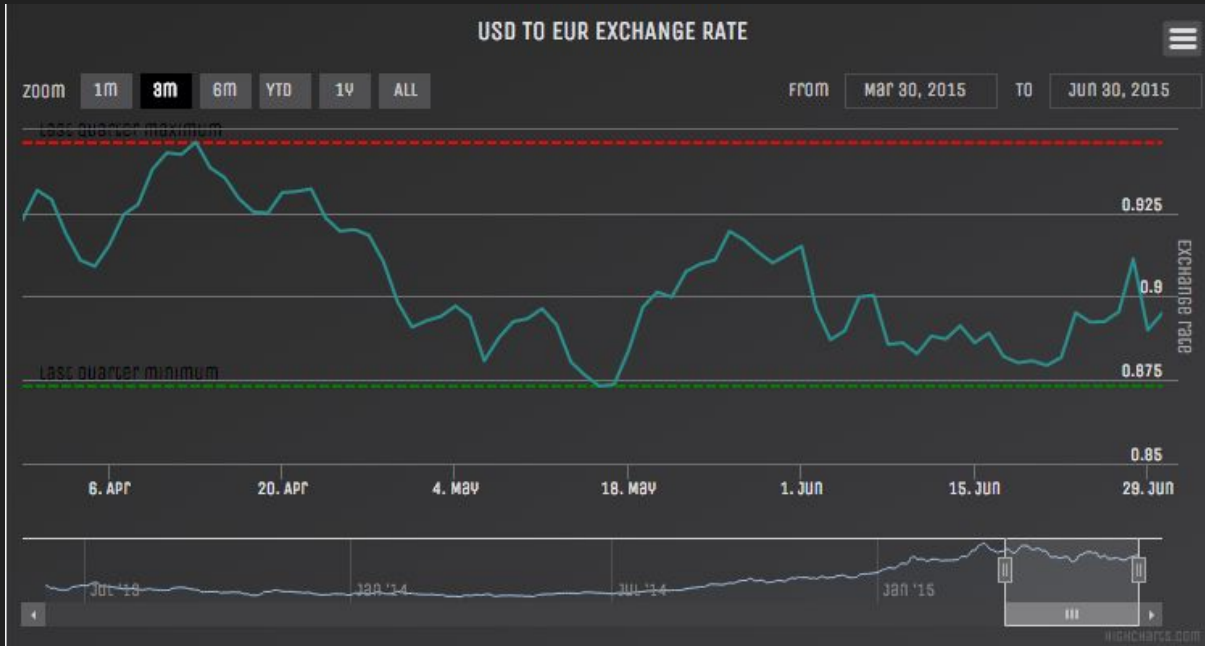
- Bootstrap
  - Responsive framework for the web
  - <http://getbootstrap.com/>
- Font Awesome
  - CSS Toolkit (cool icons)
  - <https://fontawesome.github.io/Font-Awesome/>



# **Demo #1: Oilsands**

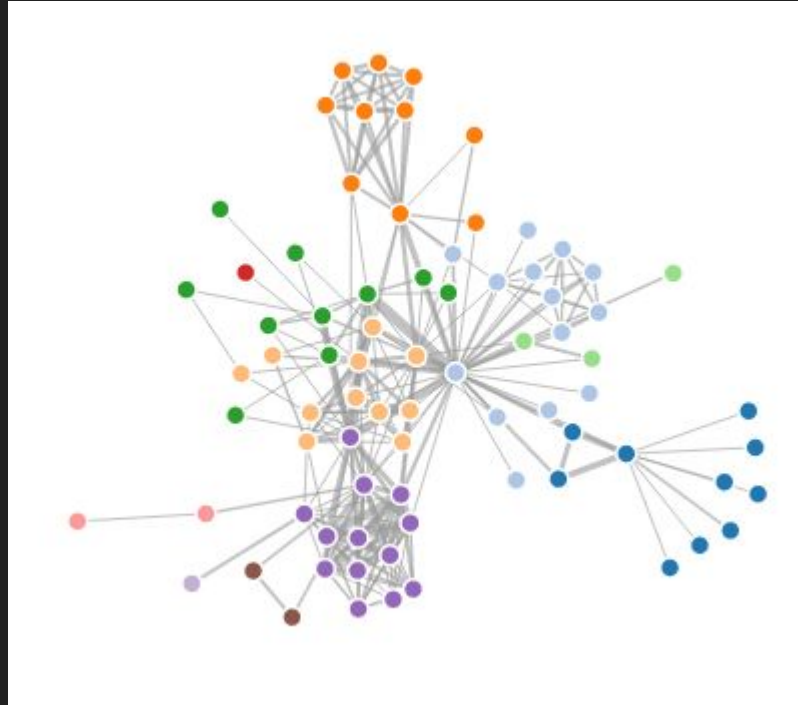
## **Part 2: HighCharts API + D3**

# HighCharts API



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

# D3



<https://d3js.org/>

## Demo #2: Social Dynamics

## Part 3: Heroku, Databases, APIs, others

# Heroku

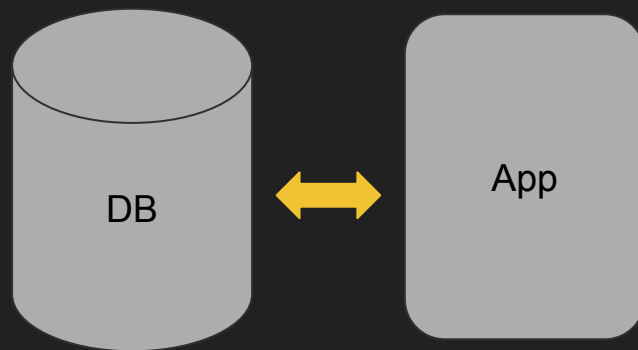
Let's deploy our Social Dynamics app!

<https://heroku.com>

# Databases

## Relational Databases

- MySQL
- PostgreSQL
  - JSON support
  - Windows Functions
  - Nice integration with Flask
- MemSQL - <http://www.memsql.com/>





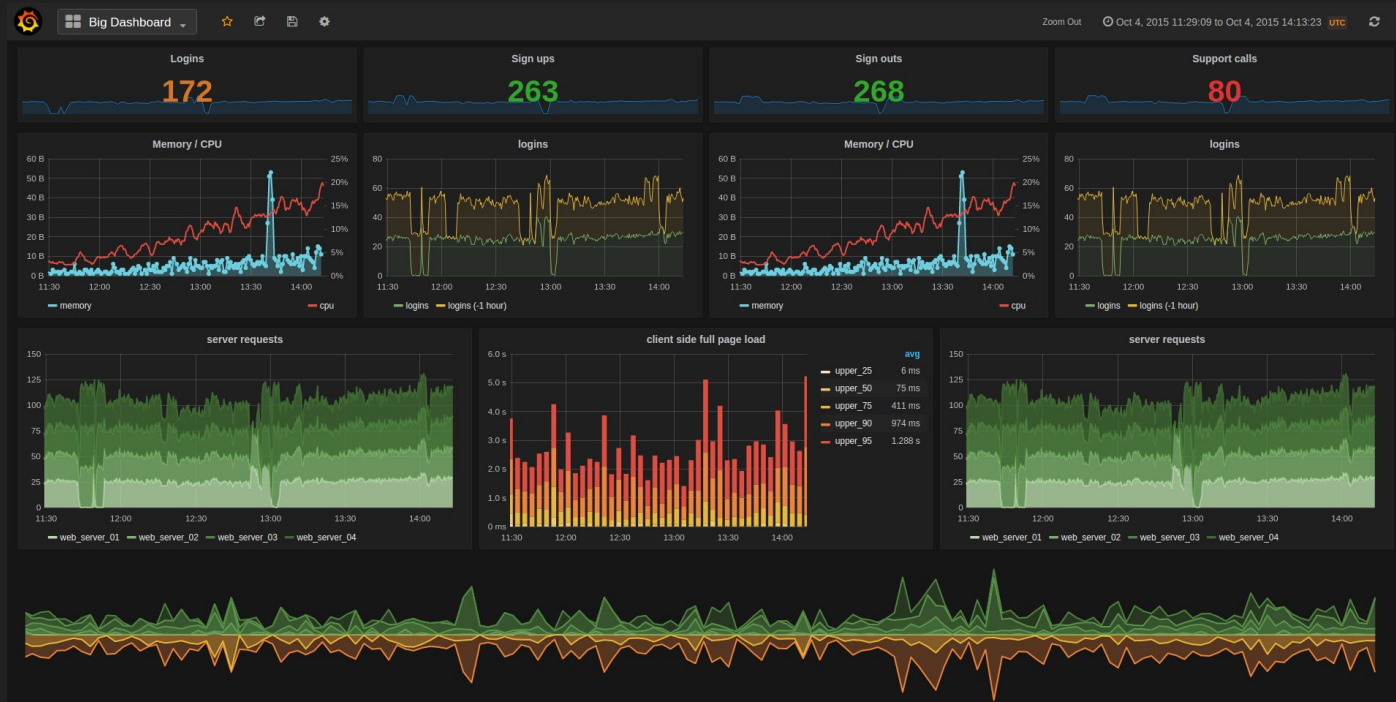
# Useful APIs

- **Boto** (Archive)
  - Chrome Application for file-browsing
  - <http://docs.ceph.com/docs/master/radosgw/s3/python/>
- **Sendgrid** (Email)
  - [https://sendgrid.com/docs/Integrate/Code\\_Examples/Webhook\\_Examples/python.html](https://sendgrid.com/docs/Integrate/Code_Examples/Webhook_Examples/python.html)
- **Twilio** (SMS)
  - <https://github.com/twilio/twilio-python>
- **Google Webmaster Tools**
  - <http://amintor.com/1/post/2013/11/technology-extend-python-library-for-google-web-master-tools.html>
- **Google Adwords**
  - <https://github.com/googleads/googleads-python-lib>

# Fabric

- Fabric can help build automation!
  - Some automation: <https://gist.github.com/stronnics/a9586aaa2bdefa9e1cda.js>
- <http://www.fabfile.org/>

# Grafana & InfluxDB



<http://grafana.org/>

# Conclusion

- Data and Analytics Dashboards
- Frameworks
  - Flask (Python)
  - Bootstrap and Font Awesome (HTML/CSS)
- Data Visualization
  - HighCharts (JavaScript)
  - D3 (JavaScript)
- Technologies
  - Heroku
  - Fabfile
  - Grafana
- Other APIs: Boto, Sendgrid, Twilio, Google Webmaster Tools, Google Ads

# Building Your Own Web Analytics Dashboard

<https://github.com/stronnic/confoo-2016>

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