

# West Michigan Users Group



Calvin College, 259 North Hall  
1/17/17

**Thanks to Meeting Sponsor:**



# Agenda

## ***Announcements***

### ***Exploring Text Message Habits in Shiny***

- Kevin Putschko, Experis

### ***A Review of Microsoft's Image Recognition and Face Detection API***

- Aaron Clark, Advanced Radiology Services

**Last 10 mins to discuss future topics, presenters, venues, and meetings!**

# Announcements

## ***Learn Shiny!***

### ***Recently Published Resource for Beginners:*** ***Building Shiny App Exercises Part 1 & 2***

“Shiny is a package from RStudio that can be used to build interactive web pages with RStudio. Use the examples in this tutorial to “take a first bite” and prepare for the exercises that follow and will help you build your first Shiny Application from ‘zero point’.”

# Announcements

## Upcoming Conferences with R Topics

**Conference on Statistical Practice: Feb 23 - 25**

**Jacksonville, FL**

**<http://ww2.amstat.org/meetings/csp/2017/>**

**Deadline is Feb 9th!**



**PharmaSUG: May 13 - 17**

**Baltimore, Maryland**

**[www.pharmasug.org](http://www.pharmasug.org)**

**Deadline is April 13th for early bird registration!**



**Joint Statistical Meeting: July 29 - Aug 3**

**Baltimore, Maryland**

**<http://ww2.amstat.org/meetings/jsm/2017/>**

**Deadline is June 1st for early bird registration!**



# Announcements

## ***An Upcoming Local Talk***

### ***Who & What?***

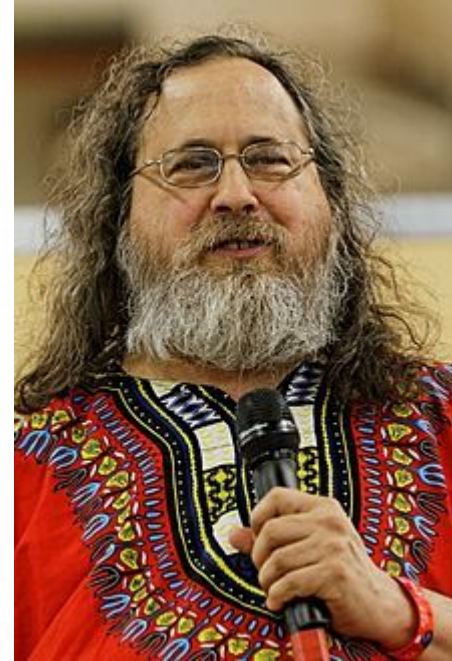
[Richard Stallman](#) on "Free Software and Your Freedom"

- *Founder of the Free Software Foundation*
- *Creator of the GNU software suite, copy-lefting, etc*
- *RMS will speak about the goals and philosophy of the Free Software Movement, and the status and history of the GNU operating system, which in combination with the kernel Linux is now used by tens of millions of users world-wide.*

### ***When & Where?***

- *Wednesday, February 1, 2017, 3:30-4:45pm*
- [Covenant Fine Arts Center Recital Hall](#), Calvin College

More information may be obtained from Keith Vander Linden of Calvin: [kvlinden@calvin.edu](mailto:kvlinden@calvin.edu).





# Announcements

## New R Jobs in the Area or Online

Posted since our last meeting... via <https://www.r-users.com/>

Freelance	<b>R Programmer for Statistical Research on hedge funds</b> Empiricus – Posted by <a href="#">empiricus</a>	Anywhere	7 Jan 2017
Full-Time	<b>Customer Success Rep</b> <a href="#">RStudio</a> – Posted by <a href="#">jclemens1</a>	Anywhere	3 Jan 2017

... via *Indeed.com*

### Advanced Analytics Analyst

Steelcase - ★★★★★ 255 reviews - Grand Rapids, MI 49508

Sound understanding and applied use of various advanced analytics tools like SAS, R, Matlab...  
etc. About Steelcase Inc....

Easily apply

15 days ago - [save job](#) - [more...](#)



# Call for Presenters!

## Lightning Talks

- 10 minutes with 5 minutes for questions
- Short informal topic oriented talks, a couple of slides and/or a demonstration.
- Examples: show off that great new package or code snippet you found (or developed yourself).
- Students! These are a great way to add a bullet point to your resume. The format is essentially the same as conference contributed talks, but we're a LOT less intimidating
- Earn Microsoft R Swag



# Call for Presenters!

## **R Use-cases**

- 30 - 50 minutes with time for questions
- Longer, going into more depth and are more workflow-oriented.
- Examples: walk us through a recent project or statistical method in R.
- Of course, Earn Microsoft R Swag

## 1st Talk

# ***Exploring Text Message Habits in Shiny***

- Kevin Putschko, Experis

It is increasingly popular for anyone with a mobile phone to be able to track their own personal data - from heart rate, to location, to food and beer consumption. However, one area we have yet to see much exploration of is our personal communication habits. With apps freely available on Android, along with the assistance of R, ggplot2, and Shiny we will delve into my personal messaging habits.

## 2nd Talk

# ***A Review of Microsoft's Image + Emotion Recognition and Face Detection API***

- Aaron Clark, Advanced Radiology Services

Provide an image, select which kind of analysis you like to perform, and receive a (well) coded response. Microsoft has made it extremely easy to analyze an image. This presentation will demonstrate exactly how easy it is to get started and suggest potential uses for such a tool.

# My Expertise Level



# Microsoft what?

## *Intro to Microsoft Cognitive Services APIs*

<https://www.microsoft.com/cognitive-services/en-us/>



## Cognitive Services

Get started for free

Home

APIs ^

Applications

Documentation and Support v

Pricing

### Vision

Computer Vision

Content Moderator

Emotion

Face

Video

### Speech

Bing Speech

Custom Recognition

Speaker Recognition

### Language

Bing Spell Check

Language

Understanding

Linguistic Analysis

Text Analytics

Translator

WebLM

### Knowledge

Academic

Entity Linking

Knowledge Exploration

QnA Maker

Recommendations

### Search

Bing Autosuggest



Bing Image Search

Bing News Search

Bing Video Search

Bing Web Search


# Gain Access to an API

1. Create a free account
2. Verify your email address
3. Click the button: 
4. You'll be redirected to here 

Check the APIs you want to try

5. Copy your Key into your R script!

My free subscriptions (3)

Product	Description	Keys	State	Created	Quota	
Face - Preview	30,000 transactions per month, 20 per minute.	Key 1: XXXXXXXXXXXXXXXXXXXXXXXXXXXX Regenerate   Show   Copy Key 2: XXXXXXXXXXXXXXXXXXXXXXXXXXXX Regenerate   Show   Copy	active	6/9/2016 9:55:17 AM	Show Quota	<div>Buy On Azure </div> <div>Cancel</div>

## Request new trials

Product Name	Description
<input type="checkbox"/> Recommendations - Preview	10,000 transactions per month.
<input type="checkbox"/> Text Analytics - Preview	5,000 transactions per month.



# Face Detection API

## Uses:

- The government has already been using this forever...
- Tagging friends on facebook;
- Focus camera on subjects face with iphone
- Very useful for smartphone app developers!

## Example:

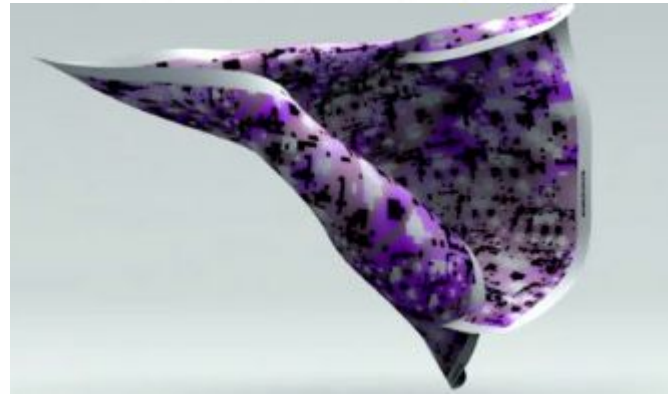
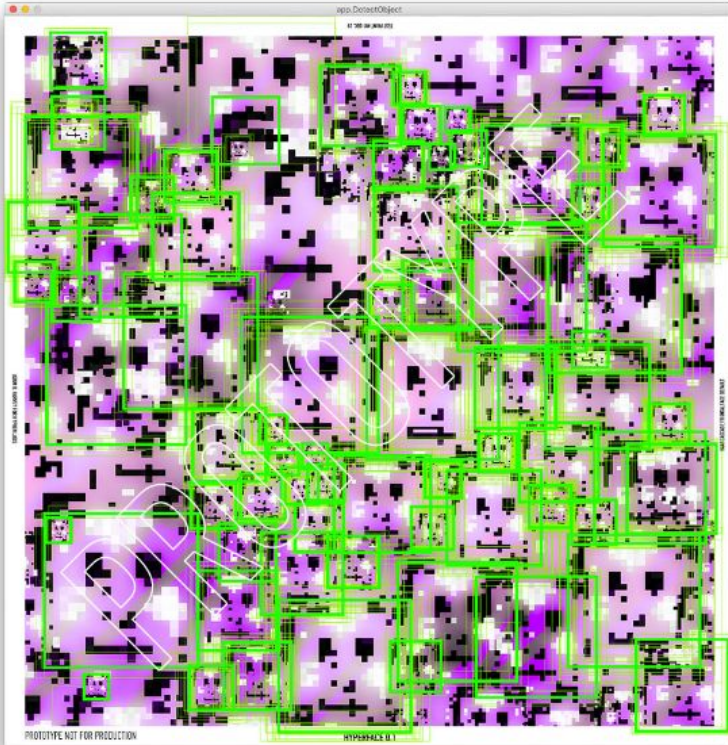


	X	Y
pupilLeft	475.4	158.6
pupilRight	590.6	157.3
noseTip	534.4	227.7
mouthLeft	460.8	273.7
mouthRight	603.6	268.2
eyebrowLeftOuter	425.2	154.8
eyebrowLeftInner	508.4	142.3
eyeLeftOuter	458.6	162.6
eyeLeftTop	473.6	153.8
eyeLeftBottom	475.0	164.0

**Live  
Demo!**

# Counter Face Detection Efforts

**Artists & technologists have been collaborating to throw off face detection software by camouflaging themselves with clothing covered in patterns that look like faces.**

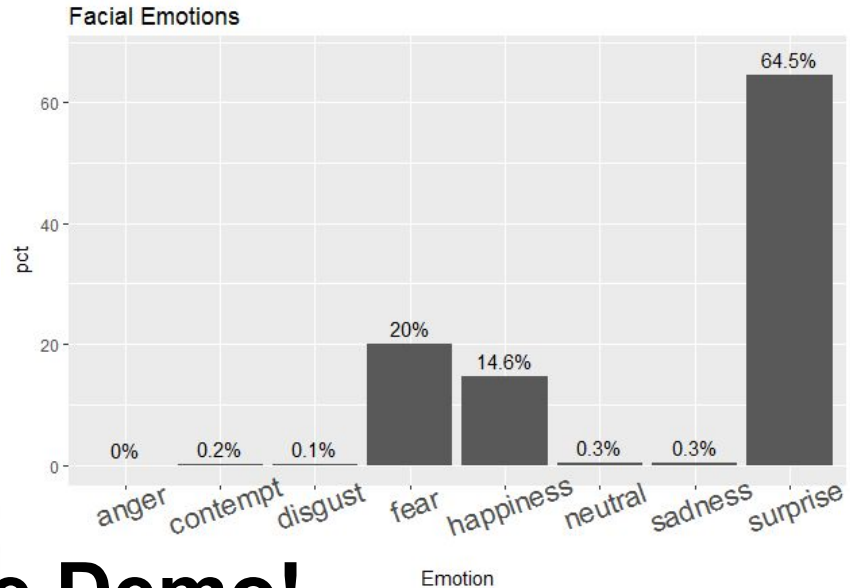


# Emotion Recognition API

## Potential Uses:

Why survey customers anymore? Just take a picture a customer while using a product! Measure respondents emotions in real time and make adjustments if necessary.

## Example:



**More Live Demo!**

# Vision API (Tagging the image with descriptors)

## Potential Uses:

- Find out if an object of interest is in the photo
- Find persons of interest (celebrities)
- Is there a car in the intersection during a red light?
- Is there a deer on my hunting cam?

## Example:



**Even More  
Live Demo!**



# In Summary, Check out Microsoft Cog Services!

## Questions?

### Contact:

[clark.aaronchris@gmail.com](mailto:clark.aaronchris@gmail.com)

<https://www.linkedin.com/in/dataaaronclark>

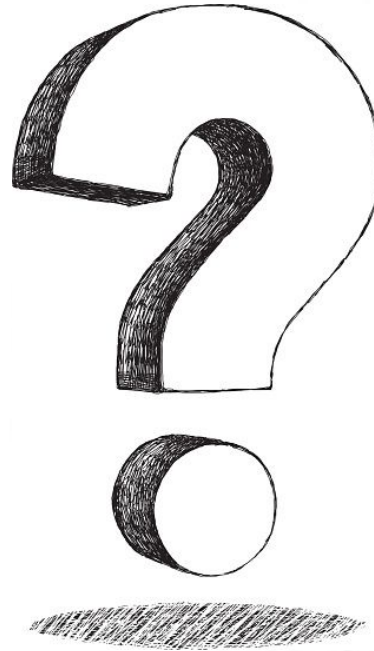
### Resources:

Emotion & Face: <http://thinktostart.com/analyze-face-emotions-r/>

Computer Vision: [http://flovv.github.io/Roxford\\_extension/](http://flovv.github.io/Roxford_extension/)

Clothing Faces:

<http://www.csmonitor.com/Technology/2017/0108/Can-this-clothing-defeat-face-recognition-software-Tech-savvy-artists-experiment>



**Last 10:**

**Discuss...**

**future topics, presenters, venues, and meetings!**



# Our Next Meetup

Wednesday, FEB 8th at GVSU Pew Campus (downtown) - Room # TBD

## Joint Meeting w/ the “Big Data and Hadoop Users Group of West Michigan”

Business Analyst **Shannon McCormick** of **Meijer** will present on using Google Tensor Flow with R. Following Ms. McCormick's presentation, we'll open the floor to a succession of 5 to 10 minute lightning talks on any big-data-related topic, R or otherwise! If you have an idea for a lightning talk, let us know! We already have 3 slots filled, but there is still room.

Pizza will be served at 6pm!

