



# Postr: The Poster Competition Voting System

Steven Kingaby  
20th June 2016



# Objective

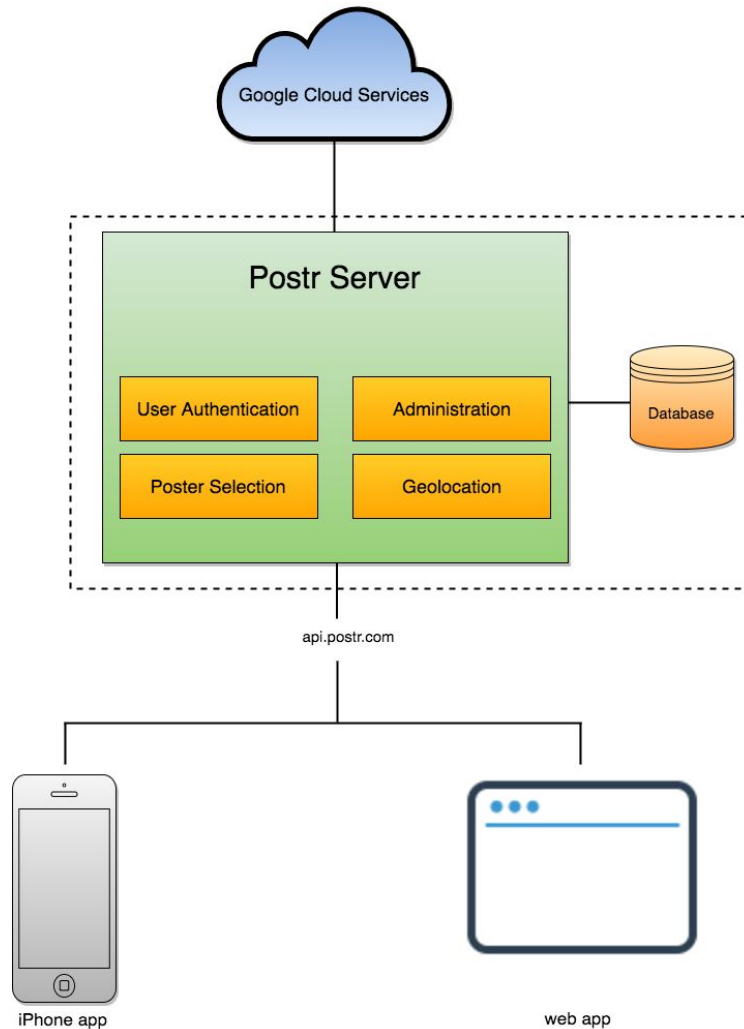
To create a solution to allow individual attendees at poster events to vote for their favourite posters.



# Approach and Assumptions

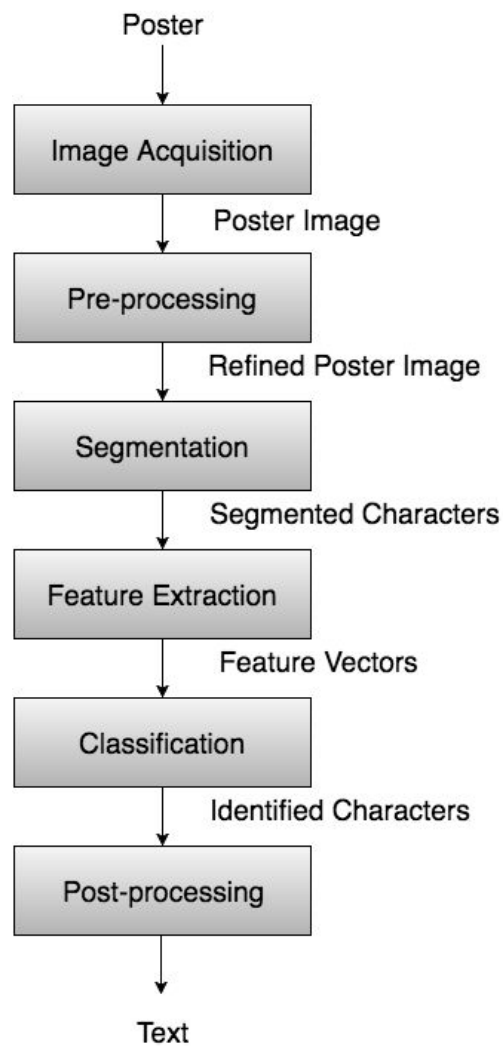
- The solution uses a mobile phone to send images of posters to a server-side controller which correlates and votes for the posters.
- The solution presents the leaderboard for posters in the event ranked by popularity (vote count).
- The control system is accessible by a web app and is administered by an event coordinator.
- An event attendee can vote for more than one poster but no double-voting is allowed.
- OCR has been pre-selected as the data capture method.

# Architecture



# Client Side: Voting Demo

# OCR

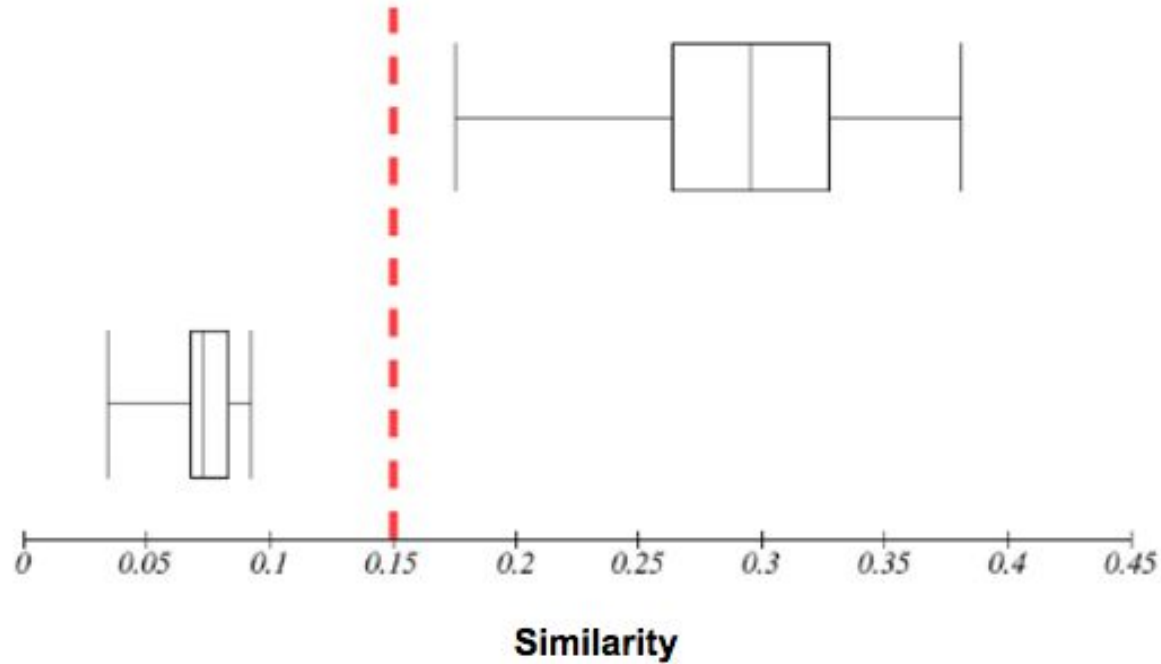


# Matching Posters

- Using the text output from the OCR process, a nearest neighbour search is performed on the title and author of registered posters.
- The search outputs a measure of similarity.



# Threshold Value



# Client Side: Leaderboard Demo

# Client Side: Nearest Events

# Nearest Events

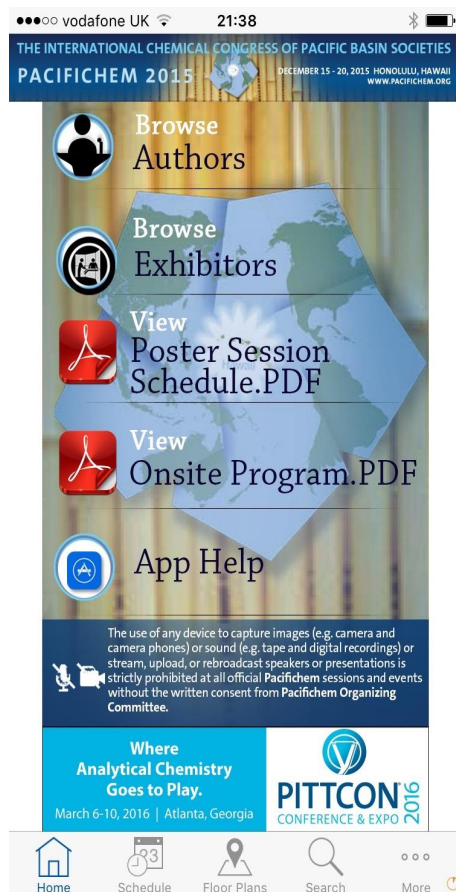
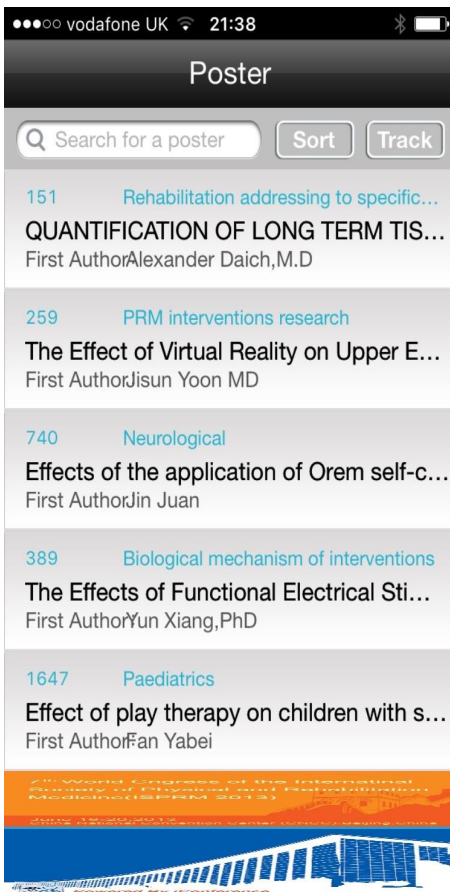
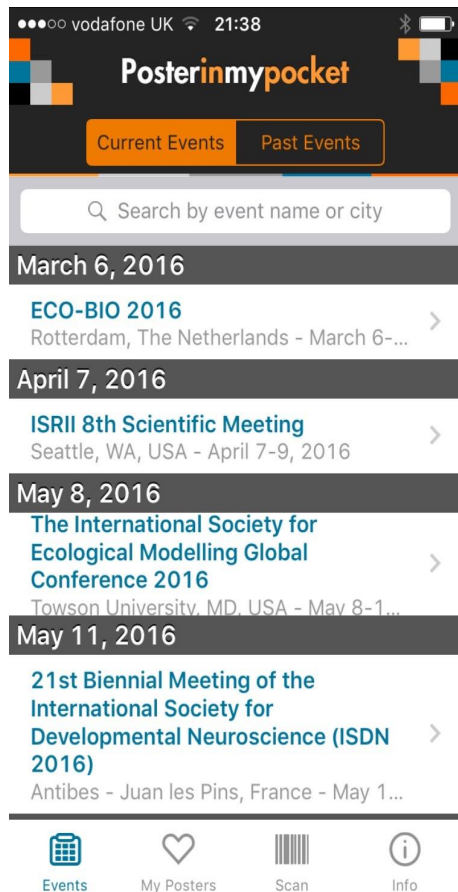
- Latitude and longitude of each event stored in database
- Haversine formula was used to determine the distance between two given events.

$$d = 2 \arcsin \left( \sqrt{\sin^2 \left( \frac{\phi_2 - \phi_1}{2} \right) + \cos \phi_1 \cos \phi_2 \sin^2 \left( \frac{\lambda_2 - \lambda_1}{2} \right)} \right)$$

# Client Side: Event Setup Demo

Q&A:

Thank you for your time



# HERRING GULLS

## Population scale patterns of movement and habitat use

Christine Anderson<sup>1</sup>

<sup>1</sup> Massachusetts Department of Conservation and Recreation  
<sup>2</sup> Environment Canada  
<sup>3</sup> Acadia University  
 Poster #1-D-17

Mark Mallory<sup>3</sup>  
 Grant Gilchrist<sup>2</sup>  
 Rob Ronconi<sup>2</sup>  
 Chip Wesloh<sup>2</sup>  
 Dan Clark<sup>2</sup>

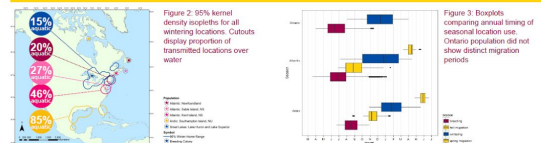
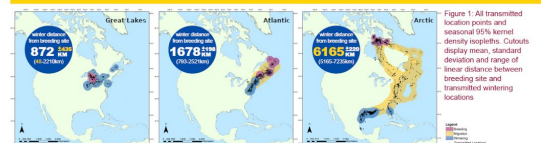


### Background

- Coarse Herring Gull movement patterns previously described for Atlantic and Great Lakes populations using banding data<sup>1</sup>
- Very little is known about movement patterns of northern breeding populations<sup>1</sup>
- Recent studies suggest northern populations have higher survival rates, but it is unclear why<sup>2</sup>

### Discussion

- **3 distinct movement strategies:**  
 Great Lakes population = winter dispersal  
 Atlantic population = short distance migration  
 Arctic population = long distance migration
- **Leap-frog migration:** Arctic population passes Atlantic wintering sites en route to Mississippi delta
- **Arctic population spends a much higher proportion of winter using marine habitats.**  
 This could contribute to differences in survival rates



### Methods

- 18-30g ARGOS doppler and GPS transmitters deployed on Adult Herring Gulls
- Assignment to seasons and spatial analyses in ArcGIS 10.1

Population	Breeding Location	Year	Private tracks
Arctic	Southwestern Lake Superior	2008-2010	14
Atlantic	Southwestern Lake Superior	2008-2010	14
Atlantic	Southwestern Lake Superior	2010-2011	14
Atlantic	Southwestern Lake Superior	2011-2012	14
Atlantic	Southwestern Lake Superior	2012-2013	14
Atlantic	Southwestern Lake Superior	2013-2014	14

### Next Steps

- State-space model to assess migratory stopovers and to provide even sampling distribution for comparing populations
- Describe migratory stopover patterns
- More detailed analysis of habitat use, particularly of anthropogenic vs natural terrestrial habitats

<sup>1</sup> Anderson et al. 2004 "Survival Rates of Adult Herring Gulls: Winter Dispersal vs. Winter Migration"  
<sup>2</sup> Anderson et al. 2010 "Survival Rates of Adult Herring Gulls: Winter Dispersal vs. Winter Migration"

Anderson et al. 2010 "Survival Rates of Adult Herring Gulls: Winter Dispersal vs. Winter Migration"



## Creative Lifelong Education System to enhance perception of time in Human life

Manish Abraham

Creativity in Education, IOT 2027, University of Malta

### Introduction

The main focus of this poster is on the fact how creativity can influence the perception of human mind and how creativity in education can enhance the perception of time we are living in.

In the troubled future of the Universities, this concept of lifelong learning could boost and form a new potential business that they would like to venture.

The few topics that are needed to be understood are the concept of relativity, perception, time and creativity.



### Creativity

Amabile (1987) defines creativity as "a novel and appropriate solution (product or response) to an open-ended task" (p. 227).

Csikszentmihalyi and Wolfe (2005) view creativity as "an idea or product that is original, valued, and implemented" (p. 81).

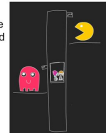
Creative needs include curiosity, the need to meet challenge and attempt difficult tasks, the need to become fully absorbed in a task, and the need for individuality.

Creativity is found along a continuum: when it is less contextualized, or internal, the focus is on the psychometric, or personality and process; when it is more contextualized, or external, the focus is on the social-psychological (Amabile).

### Relativity

Hendrick (1921) says that everything around us is relative, this makes sense in our perception of reality and time.

If we move in an elevator we presume that the world around is moving, but in a different scenario when we look from outside it is totally opposite, same is with time.



### Time

Time is relative too. We all might presume that time is a fixed dimension, one second for me is one second for you, but there is a difference on how every individual experiences it and perceives it. Our brain is not just keeping track of time but our brain also constructs time.



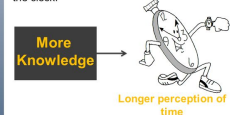
### Perception of Time

If you don't let a lot of information in, your brain is on an automatic mode and hence time perceives to move faster, this explains why time gets faster as we age since in our current system of education we tend to stop learning after a phase of life and make things more simple and hence the brain does not have to process more information.

We can make it slower by learning new things and giving more food for the brain to think and if it's creative we learn easily.

### Lifelong Creative Education System

When you were a child you might have felt that time was much slower that is because you had to learn new things, our current education system needs to bring in more of knowledge merged with creative balance so that we can find a close harmony between perceived time and the subjective time on the clock.

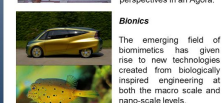
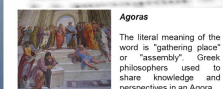


By doing this we may be able to find a perfect balance in the amount of knowledge needed to gain optimal balance of perceived time to enhance human perceived life, this may also mean that we may have to have a lifelong education system, the new education system would help humans to perceive time in a much more deeper manner, since it would be giving a continuous creative data for the brain to process.

This could lead to a totally new role for the Universities, moving further ahead from the task of educating to live life, to a place to extend perceived life. Cognitive, conative, and environmental factors would influence such a creative change.

We need to look into our past and learn from the what the others have done, one of examples would be looking at how animals perceive the world around, the field of bionics has been able to come up with a lot of creative innovations by mimicking the nature, now it's time we mimic the basic human tendency to perceive things and make it last longer by using creative education as a tool.

### Inspirations



**Creative Foresight**  
 Future solutions for the education system and how could Universities revive.

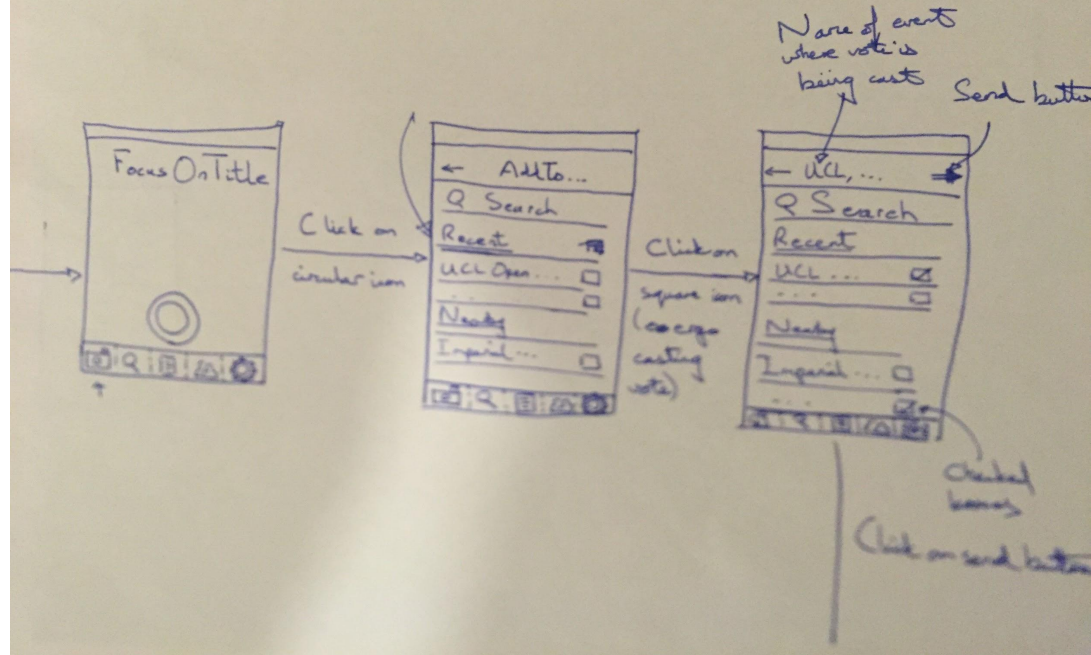
### Conclusions

The fact that time is perceived to be slower when we have to process things in our brain can be utilized in a very creative way to enhance our perceived living life, by having a life long education system so that we continuously feed our brain with new data, and we also need to merge it with creativity so that we can keep the data unique.





# Camera Tab Storyboard



# Tesseract

- Open source framework with available SDKs.
- Objective C wrapper for the framework already exists and thus can be used in an iPhone app.
- Multiple resources available on how to use this framework effectively.
- Still being further developed by Google (shows that it is current and up to date with the latest OCR technology).
- Compared to other OCR frameworks I have investigated (LEADTOOLS, openRTK) , Tesseract proved to be the easiest to use and the most accurate.

# Testing

- Tested OCR capabilities using different text samples with a control.
- Will include unit tests to cover code.
- Ensuring screen gestures operate correctly.
- Begun functional test planning with consideration to how the application can be tested to sample posters.

# Milestones

- **Week 4:** Implement a basic skeleton of app, with transitions between each view in the storyboard coded.
- **Week 5:** Access camera on iPhone via app to capture an image.
- **Week 7:** Use OCR to extract text from digitised image.
- **Week 9:** Generate mockups for final UI design.
- **Week 10:** Set up server and database for logging poster entries.
- **Week 11:** Connect functionality of capturing image, text recognition, with either incrementing an entry in database or creating a new one.