



# The Usage of Augmented Reality Technology and Twitter Data for Town Planning Practices: Application of MSKU.

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Senior Design Project 1

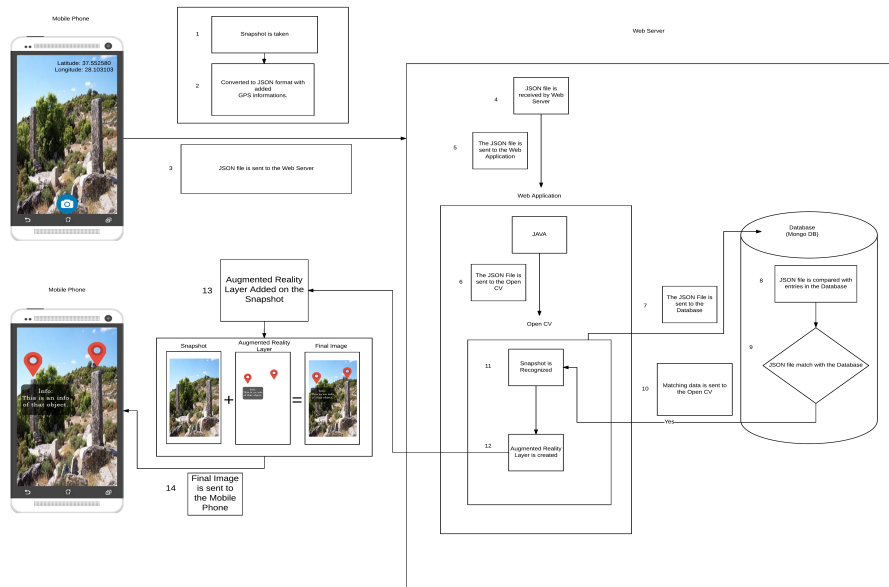
Muğla Sıtkı Koçman University  
Instructor : Assoc.Prof.Dr. Enis KARAAARSLAN

January 13, 2017

## The Aim of This Project

To create an Augmented Reality Application for town planning with social media.

# Application Working Principle



## Project Parts

- Social Media Part
- Augmented Reality Part
- Testing Results

- Social Media Parts
  - Importing Tweet Data ✓
  - Practices On MongoDB ✓
  - Splitting Dataset ✓
  - Word Comparing ✓
  - The Usage of Python-UCI Library ✓
  - Python and Google Drive Connection ✓
  - Working on Libraries(fuzzywuzzy,levenstein, jellyfish) ✓
  - Mongo-Java-Driver connection ✓
- Augmented Reality Parts
  - Template Matching Method ✓
  - Android Application ✗

# Importing Tweet Data

```
2017-01-08T13:48:02.813+0300 [#####.....] ugurdb.mugla_tweets 3.97GB/5.18GB (76.6%)
2017-01-08T13:48:05.812+0300 [#####.....] ugurdb.mugla_tweets 4.00GB/5.18GB (77.1%)
2017-01-08T13:48:08.812+0300 [#####.....] ugurdb.mugla_tweets 4.03GB/5.18GB (77.9%)
2017-01-08T13:48:11.812+0300 [#####.....] ugurdb.mugla_tweets 4.06GB/5.18GB (78.4%)
2017-01-08T13:48:14.812+0300 [#####.....] ugurdb.mugla_tweets 4.08GB/5.18GB (78.8%)
2017-01-08T13:48:17.812+0300 [#####.....] ugurdb.mugla_tweets 4.12GB/5.18GB (79.5%)
2017-01-08T13:48:20.812+0300 [#####.....] ugurdb.mugla_tweets 4.15GB/5.18GB (80.1%)
2017-01-08T13:48:23.812+0300 [#####.....] ugurdb.mugla_tweets 4.19GB/5.18GB (80.8%)
2017-01-08T13:48:26.812+0300 [#####.....] ugurdb.mugla_tweets 4.22GB/5.18GB (81.4%)
2017-01-08T13:48:29.812+0300 [#####.....] ugurdb.mugla_tweets 4.25GB/5.18GB (82.1%)
2017-01-08T13:48:32.814+0300 [#####.....] ugurdb.mugla_tweets 4.28GB/5.18GB (82.6%)
2017-01-08T13:48:35.812+0300 [#####.....] ugurdb.mugla_tweets 4.31GB/5.18GB (83.2%)
2017-01-08T13:48:38.812+0300 [#####.....] ugurdb.mugla_tweets 4.34GB/5.18GB (83.8%)
2017-01-08T13:48:41.812+0300 [#####.....] ugurdb.mugla_tweets 4.37GB/5.18GB (84.3%)
2017-01-08T13:48:44.812+0300 [#####.....] ugurdb.mugla_tweets 4.40GB/5.18GB (84.9%)
2017-01-08T13:48:47.813+0300 [#####.....] ugurdb.mugla_tweets 4.43GB/5.18GB (85.6%)
2017-01-08T13:48:50.812+0300 [#####.....] ugurdb.mugla_tweets 4.47GB/5.18GB (86.2%)
2017-01-08T13:48:53.812+0300 [#####.....] ugurdb.mugla_tweets 4.50GB/5.18GB (86.9%)
2017-01-08T13:48:56.812+0300 [#####.....] ugurdb.mugla_tweets 4.53GB/5.18GB (87.5%)
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2017-01-08T13:49:05.815+0300 [#####.....] ugurdb.mugla_tweets 4.63GB/5.18GB (89.3%)
2017-01-08T13:49:08.812+0300 [#####.....] ugurdb.mugla_tweets 4.66GB/5.18GB (89.9%)
2017-01-08T13:49:11.812+0300 [#####.....] ugurdb.mugla_tweets 4.68GB/5.18GB (90.4%)
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2017-01-08T13:49:29.813+0300 [#####.....] ugurdb.mugla_tweets 4.87GB/5.18GB (94.1%)
2017-01-08T13:49:32.812+0300 [#####.....] ugurdb.mugla_tweets 4.90GB/5.18GB (94.6%)
2017-01-08T13:49:35.816+0300 [#####.....] ugurdb.mugla_tweets 4.94GB/5.18GB (95.3%)
2017-01-08T13:49:38.812+0300 [#####.....] ugurdb.mugla_tweets 4.96GB/5.18GB (95.8%)
2017-01-08T13:49:41.812+0300 [#####.....] ugurdb.mugla_tweets 5.00GB/5.18GB (96.4%)
2017-01-08T13:49:44.812+0300 [#####.....] ugurdb.mugla_tweets 5.03GB/5.18GB (97.1%)
2017-01-08T13:49:47.813+0300 [#####.....] ugurdb.mugla_tweets 5.06GB/5.18GB (97.7%)
2017-01-08T13:49:50.812+0300 [#####.....] ugurdb.mugla_tweets 5.09GB/5.18GB (98.2%)
2017-01-08T13:49:53.812+0300 [#####.....] ugurdb.mugla_tweets 5.12GB/5.18GB (98.8%)
2017-01-08T13:49:56.813+0300 [#####.....] ugurdb.mugla_tweets 5.15GB/5.18GB (99.5%)
2017-01-08T13:49:59.107+0300 [#####.....] ugurdb.mugla_tweets 5.18GB/5.18GB (100.0%)
2017-01-08T13:49:59.115+0300 imported 2255962 documents
```

# Practices On MongoDB

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full-name.png
name.png

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```

# Splitting Dataset

agustos	31 items	Folder	Kas 4 2016
aralik	0 items	Folder	19:46
ekim	13 items	Folder	Kas 4 2016
eylul	30 items	Folder	Kas 4 2016
haziran	18 items	Folder	Kas 4 2016
kasim	0 items	Folder	Kas 4 2016
temmuz	31 items	Folder	Kas 4 2016
1Ekim.json	23,0 MB	Program	Eki 27 2016
2016-10-13.json	4,1 GB	Program	Eki 25 2016
2016-10-13_mini.json	22,7 kB	Program	Eki 26 2016
agustos_gunluk_tweet.sh	8,3 kB	Program	13:58
aralik_gunluk_tweet.sh	8,3 kB	Program	13:02
ekim_gunluk_tweet.sh	8,2 kB	Program	Kas 4 2016
eylul_gunluk_tweet.sh	8,0 kB	Program	Kas 4 2016
haziran_gunluk_tweet.sh	8,1 kB	Program	13:59
kasim_gunluk_tweet.sh	8,0 kB	Program	Kas 4 2016
temmuz_gunluk_tweet.sh	8,3 kB	Program	Kas 4 2016



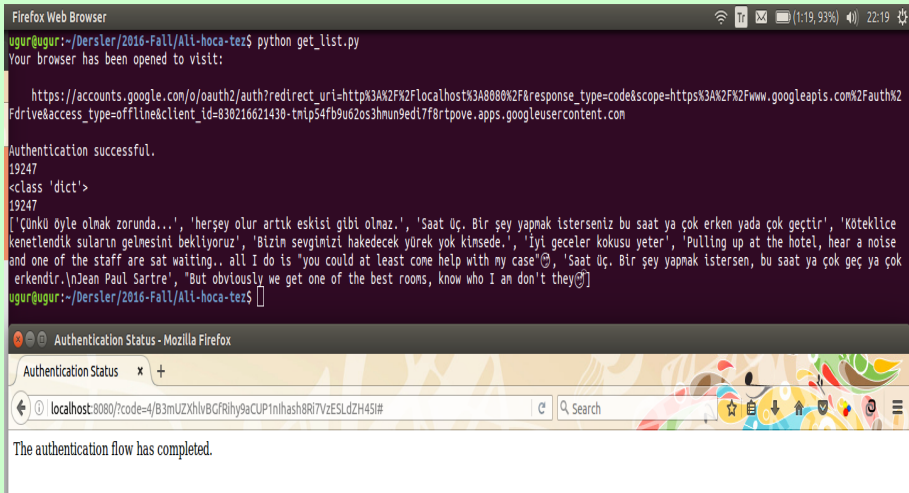
# Word Comparing

Acıpayam	paylaşım
Ada	Arda
Adaları	Adaları
Adalardan	Adamlardan
Adaları	adaları
Adalet	adalet
Adam	Ada
Adamdan	adamdan
Adamlardan	Adalardan
Adamlarının	damlasını
Adamsan	Adamdan
Adamın	damına
Adası	dansı
Adayı	dayım
Address	Adresi
Adeta	detay
Adil	dil
Adios	Aydos
Adresi	darbesi
Adriano	adriano
Adı	Adım
Adım	Adı
Adında	adında
Adını	adını
Adıyaman	Adamsan
Aegoooooooooooo	not match!
Agina	inşa
Agiz	Aziz
Agora	Ara
Ah	Ash
Ahahahahha	hahahahha
Ahh	Ah
Ahir	Air
Ahmak	Azmak
Ahmed	Ahmet
Ahmet	ahmet
Aile	ile
Air	Ahir
Akademi	kadehi

# The Usage of Python-UCI Library

```
>>> import icu
>>> a=["a","c","ç","ğ","b","g"]
>>> collator = icu.Collator.createInstance(icu.Locale('tr_TR.UTF-8'))
>>> sorted(a, key=collator.getSortKey)
['a', 'b', 'c', 'ç', 'g', 'ğ']
>>> sorted(a)
['a', 'b', 'c', 'g', 'ç', 'ğ']
```

# Python and Google Drive Connection



The image shows a terminal window and a browser window. The terminal window displays the execution of a Python script that initiates a Google Drive authentication process. The browser window shows the resulting authentication status page.

```
Firefox Web Browser
ugur@ugur:~/Dersler/2016-Fall/AlI-hoca-tez$ python get_list.py
Your browser has been opened to visit:

  https://accounts.google.com/o/oauth2/auth?redirect_uri=http%3A%2F%2Flocalhost%3A8080%2F&response_type=code&scope=https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fdrive&access_type=offline&client_id=836216621430-tmip54fb9u62os3hmun9edi7f8rtpove.apps.googleusercontent.com

Authentication successful.
19247
<class 'dict'>
19247
['Çünkü böyle olmak zorunda...', 'herşey olur artık eskisi gibi olmaz.', 'Saat Üç. Bir şey yapmak isterseniz bu saat ya çok erken yada çok geçtir', 'Kötelice kenetlendik suların gelmesini bekliyoruz', 'Bizim sevgimizi hakedecek yürek yok kimsede.', 'İyi geceler kokusu yeter', 'Pulling up at the hotel, hear a noise and one of the staff are sat waiting.. all I do is "you could at least come help with my case"', 'Saat Üç. Bir şey yapmak istersen, bu saat ya çok geç ya çok erkendir.\nJean Paul Sartre', "But obviously we get one of the best rooms, know who I an don't they"]
ugur@ugur:~/Dersler/2016-Fall/AlI-hoca-tez$
```

Authentication Status - Mozilla Firefox

Authentication Status x +

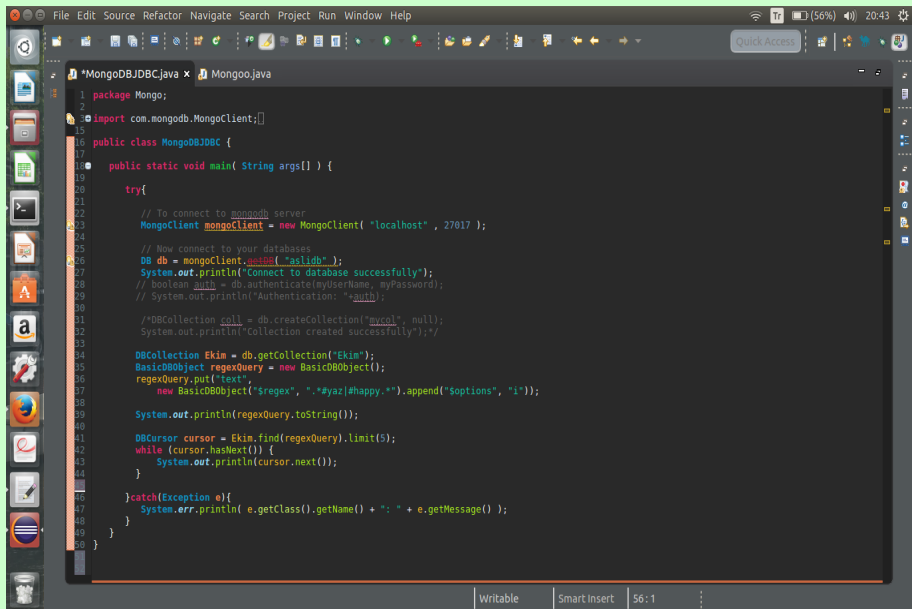
localhost:8080/?code=4/B3mUZxhlvBGfRihy9aCUP1nIhash8Ri7VzESLdZH4SI#

The authentication flow has completed.

# Working on Libraries(fuzzywuzzy, python-Levenshtein, jellyfish)

- We analyzed these libraries for finding near words in tweets. We got these libraries features and put our sample codes on Google Drive.

# Mongo-Java-Driver connection

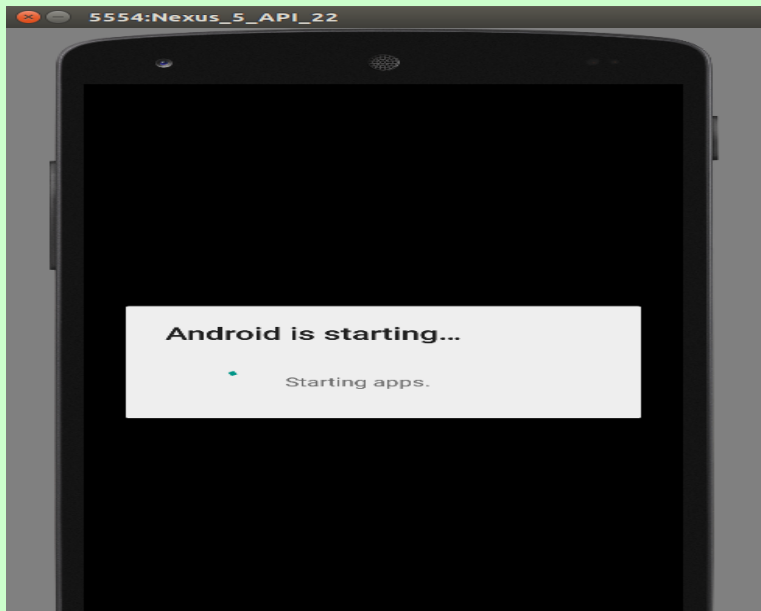


```
1 package Mongo;
2
3 import com.mongodb.MongoClient;
4
5
6 public class MongoDBJDBC {
7
8     public static void main( String args[] ) {
9
10        try{
11
12            // To connect to mongodb server
13            MongoClient mongoClient = new MongoClient( "localhost" , 27017 );
14
15            // Now connect to your databases
16            DB db = mongoClient.getDB( "aslidb" );
17            System.out.println("Connect to database successfully");
18            // boolean auth = db.authenticate(myUserName, myPassword);
19            // System.out.println("Authentication: "+auth);
20
21            /*DBCollection coll = db.createCollection("mycol", null);
22            System.out.println("Collection created successfully");*/
23
24            DBCollection Ekin = db.getCollection("Ekin");
25            BasicDBObject regexQuery = new BasicDBObject();
26            regexQuery.put("text",
27                new BasicDBObject("$regex", ".*#yaz#happy.*").append("$options", "i"));
28
29            System.out.println(regexQuery.toString());
30
31            DBCursor cursor = Ekin.find(regexQuery).limit(5);
32            while (cursor.hasNext()) {
33                System.out.println(cursor.next());
34            }
35
36        } catch (Exception e){
37            System.err.println( e.getClass().getName() + ": " + e.getMessage() );
38        }
39    }
40 }
```

# Template matching method



# Android Application



# Android Application

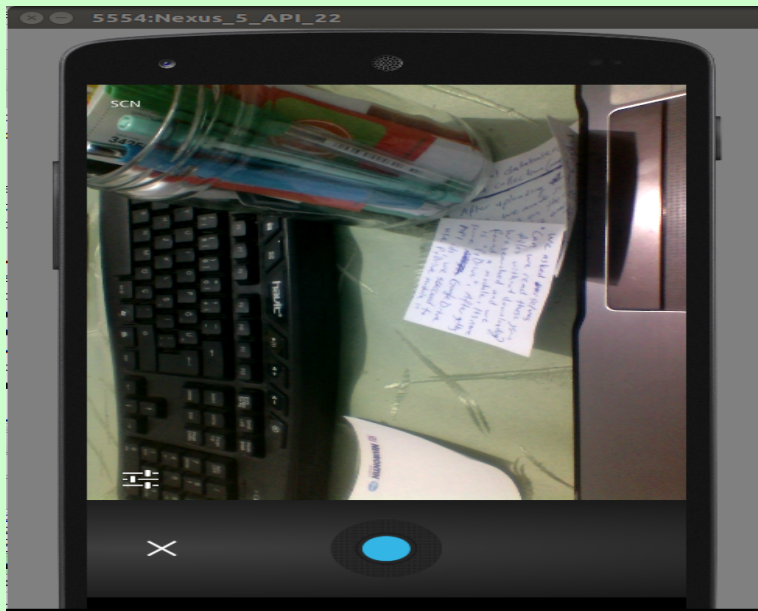




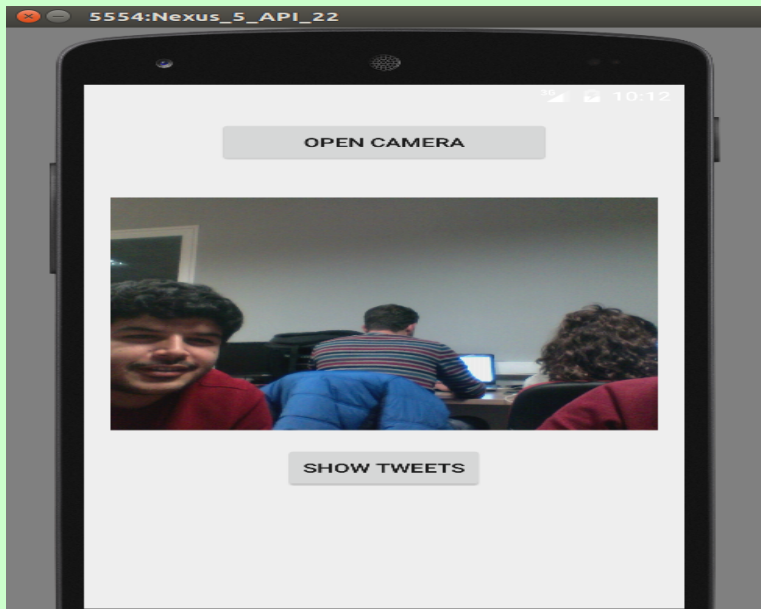
# Android Application



# Android Application



# Android Application





- 1 Arslan A., Özcan U., Karaarslan E., (2016), “Artırılmış Gerçeklik Uygulamalarının Şehircilikte Kullanılması : İnceleme ve Ön Ürün”, Akademik Bilişim, Aydın, 3 -5 Şubat



- 2 Arslan A., Özcan U., (2016), Şehircilik Uygulamaları İçin Artırılmış Gerçeklik Teknolojisi ve Twitter Verilerinin Kullanımı: MSKÜ Uygulaması Uygulamaları, Taahhütname Belgesi, Tübitak 2209-A Üniversite Öğrencileri Yurt İçi Araştırma Projeleri Destek Programı,

Thank You...