

# Portfolio

*technical works in  
Mobile, Machine  
Learning and IoT*

**Luis Alberto Gómez González**

May 2023



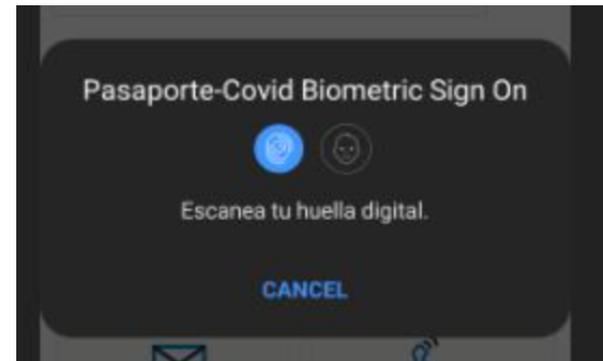
# COVID Pass



Xunta de Galicia mobile app to recognize COVID cases through SERGAS integration (Galicia Health System), inform your contacts, detect nearby cases and generate a QR with the citizen current state as a “health passport”.

Technologies: Ionic, Angular.

Jobs: analyst developer (Feb 2020 - May 2020).



# Endesa “I’m In” security consultancy

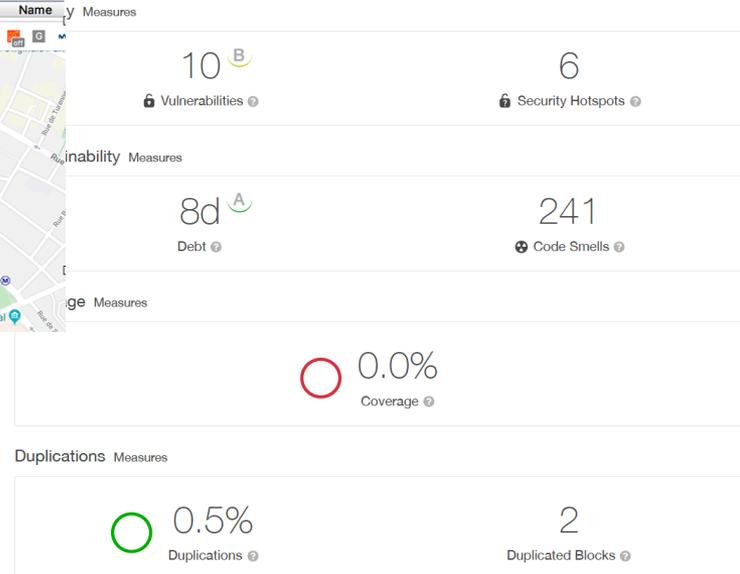
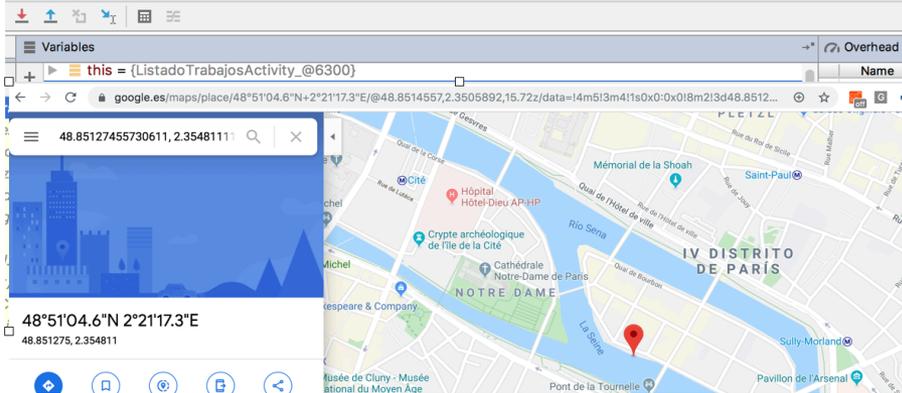


Application security consulting.  
Black & white box pen tests, injection tests,  
etc. to check if an application can be part of  
Endesa portfolio.

Technologies: Android Java, Sonar Qube.

Jobs: analyst (Sept 2019 - Oct 2019).

```
347 private void disableLocationUpdates() {
348     if (ApiClient != null && ApiClient.isConnected())
349         LocationServices.FusedLocationApi.removeLocationUpdates(ApiClient, locationListener: this);
350     Localizando = false;
351 }
352
353
354 @Override
355 public void onLocationChanged(Location location) { location: "Location[g 49*****2***** hAcc=5 et
356     Log.d("ENDESA", "Recibida nueva ubicación!");
357
358     //Mostramos la nueva ubicación recibida
359 }
```



# Bidafarma mobile app



**Alergias**  
(Última actualización 22 mar 2019)

Polen de olivo

---

**Contraindicaciones**  
(Última actualización 11 oct 2018)

Ibuprofeno

---

**Constantes**  
(Última actualización 30 may 2019)

30/05/2019 - 17:46

Peso (kg)	7
Talla (cm)	18

Bidafarma health application. The patients can follow their medication posology, vital signs, receive promotions via PUSH or manage their appointments.

Technologies: Ionic / Angular, Android, iOS.

Jobs: analyst developer (Sept 2019 - Feb 2020).

Diciembre 2018

Próxima cita

**09:00** **Lunes, 03 dic 2018**

**Dermatología**  
Farmacia IN-PLAYA C.B. (Isabel Blazquez Jerez)

**19:15** **Miércoles, 22 dic 2018**

**Dermatología**  
Farmacia Guillén Aspilche

Febrero 2019

**19:15** **Lunes, 15 feb 2019**

**Cardiología**  
Gema Ortega

**Valoración**

**Valoración Dermatológica**  
22 dic 2018 - 14:56

Antecedentes personales/familiares de melano o nevo atípico  
**No**

Exposición solar

# Real-time scanner library

Real-time QR-barcode scanner library for Android. Reusable from hybrid to native apps. It has been used in Surfpay app, an inner Minsait product.

Technologies: Android.

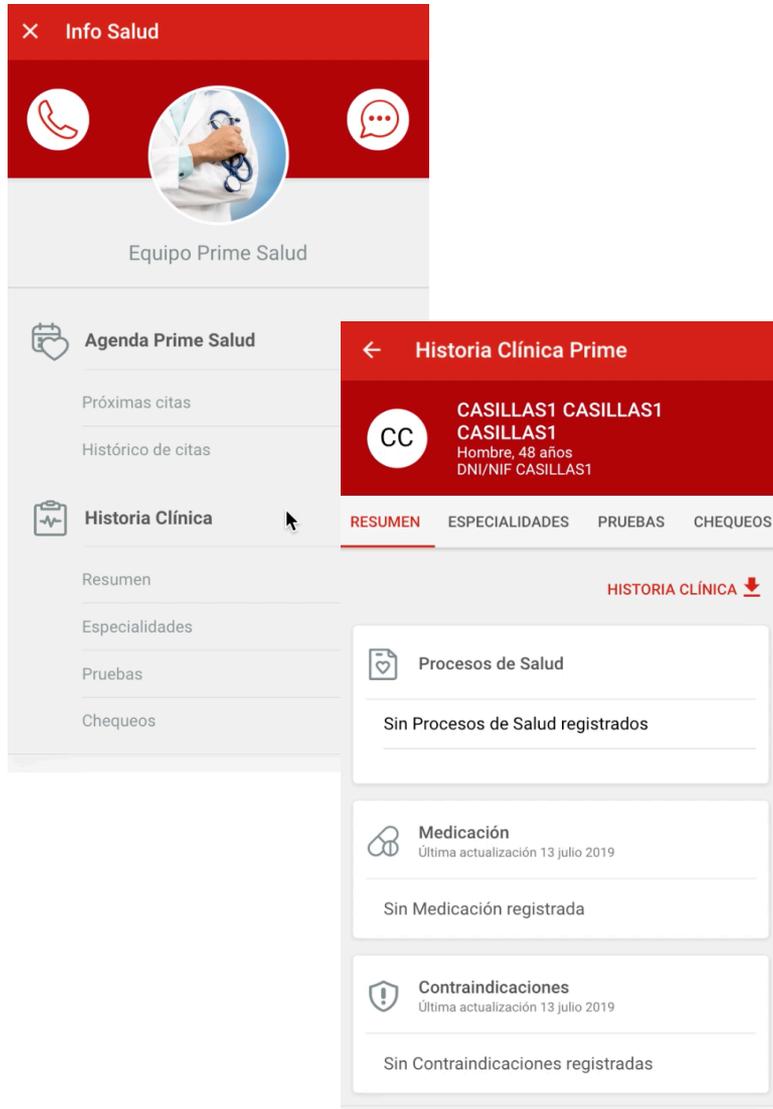
Jobs: analyst developer (Jul 2019 - Sept 2019).



# MAPFRE Salud



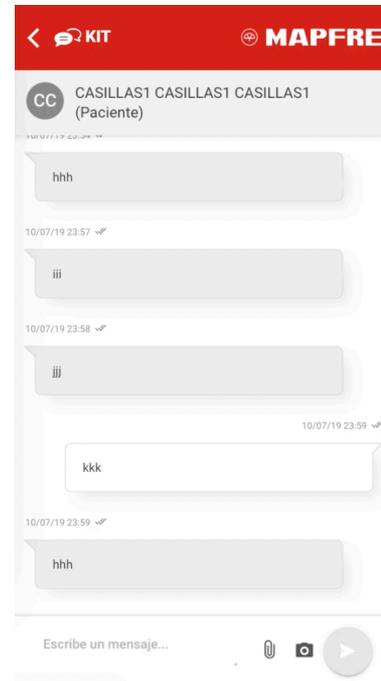
**MAPFRE**



Prime health module for VIP users in MAPFRE Salud app. It contains a real-time chat based on web sockets, appointments, maps, medical briefs, attachment management.

Technologies: Ionic / Angular, Android, iOS.

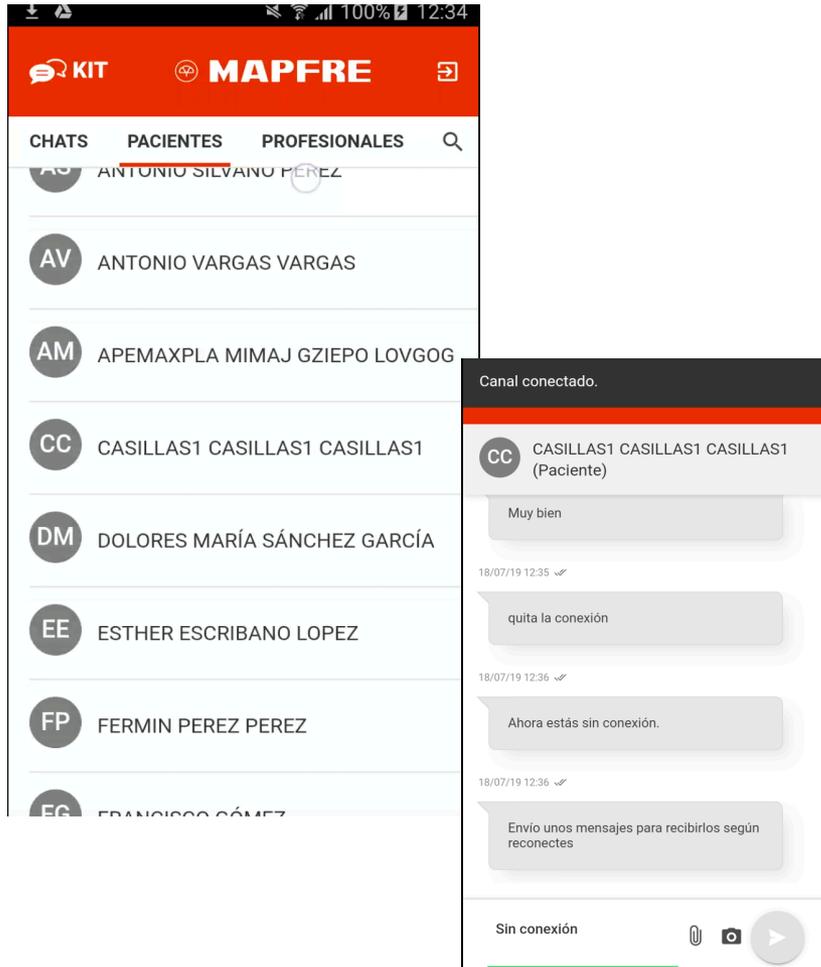
Jobs: analyst developer (May 2018 - Sept 2019).



# KIT app for doctors



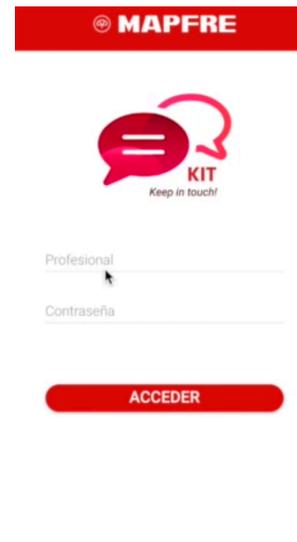
**MAPFRE**



Chat client app for MAPFRE associated doctors. Real-time communication over web sockets. Able to receive PUSH notifications on background.

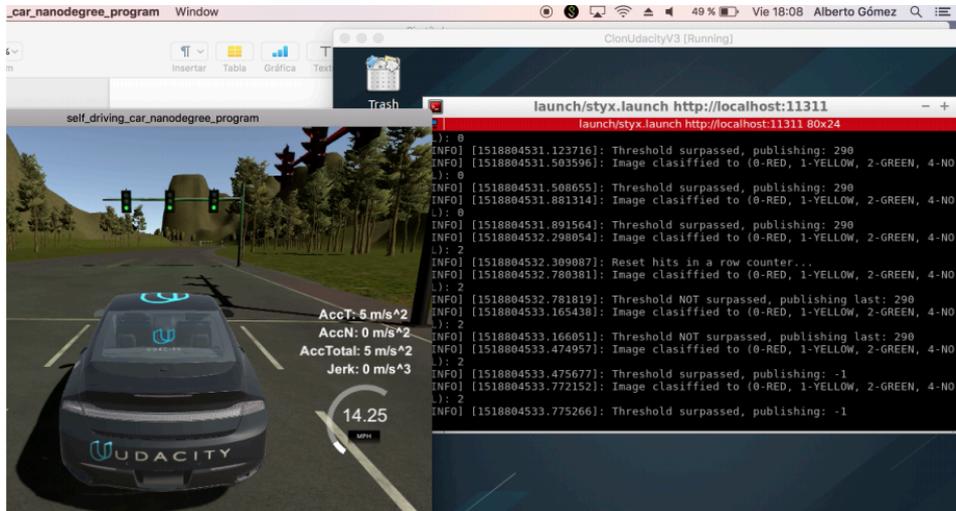
Technologies: Ionic / Angular, Android, iOS.

Jobs: analyst developer (May 2018 - Sept 2019).



## Personal & Professional Projects.

# Self-driving engineer capstone: autonomous driving.

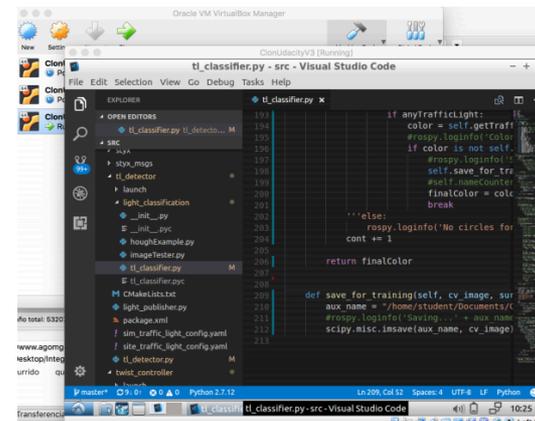


Personal project: autonomous car driving through a circuit. The developed software, which runs on ROS, allows the car to complete a circuit driving in the middle of a lane. It detects obstacles and traffic lights and stops/starts when it is required.

<http://www.agomgon.com/profile/Integration.mov.zip>

Technologies: C++/Python, Tensor Flow, Keras, Signal Theory, ROS

Job: Udacity Self-Driving Engineer project (Nov 2017 - Jan 2018).



## Personal & Professional Projects.

# Scene Segmentation and Understanding with Deep Learning



Personal project: drivable road image segmentation with Deep Learning and Artificial Intelligence techniques. Able to classify every pixel of drivable path in a scene.

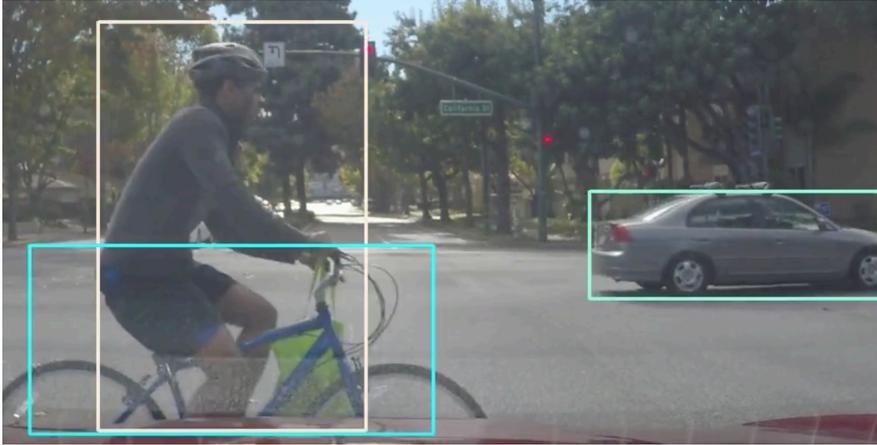
Implementation of Fully Convolutional Neural Networks.

Technologies: C++/Python, Tensor Flow, Keras, Signal Theory.

Job: Udacity Self-Driving Engineer project (Oct 2017).

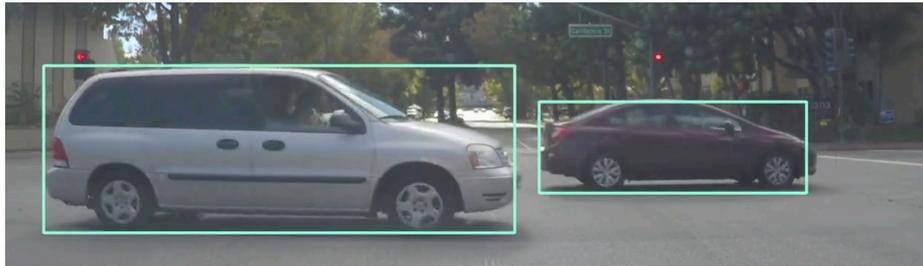
## Personal & Professional Projects.

### Moving elements detection & tracking with Deep Learning



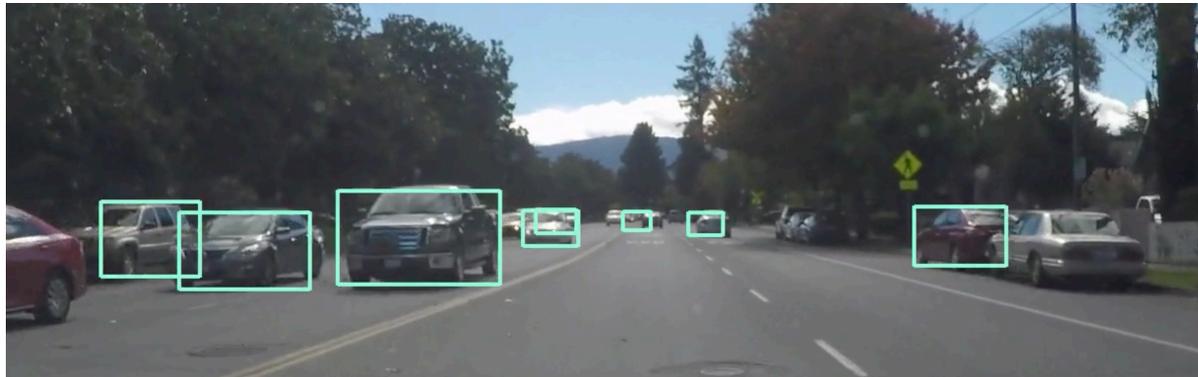
Personal project: detection & tracking of moving elements in the road and classification of them (cars, pedestrians, bikes) with Deep Learning and Artificial Intelligence techniques. Implementation of Fully Convolutional Neural Networks

<http://www.agomgon.com/profile/SingleShotMultiBoxDetector.mp4.zip>



Technologies: C++/Python, Tensor Flow, Keras, Signal Theory.

Job: Udacity Self-Driving Engineer project (Oct 2017).



## Personal & Professional Projects.

### Path Planning for vehicles with dense traffic.

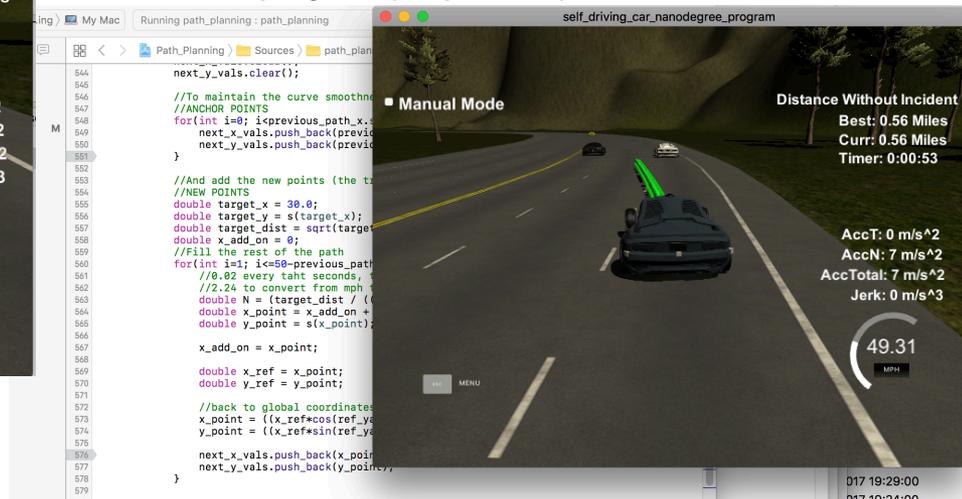


Personal project: car path planning in highways. Able to solve traffic jams with Artificial Intelligence. The software controls the steering wheel, brakes and throttle in order to drive the car and surpass slower vehicles in the highway. It uses the LIDAR and RADAR information as input.

<http://www.agomgon.com/profile/PathPlanning.mov.zip>

Technologies: C++, TensorFlow, Sensor Fusion.

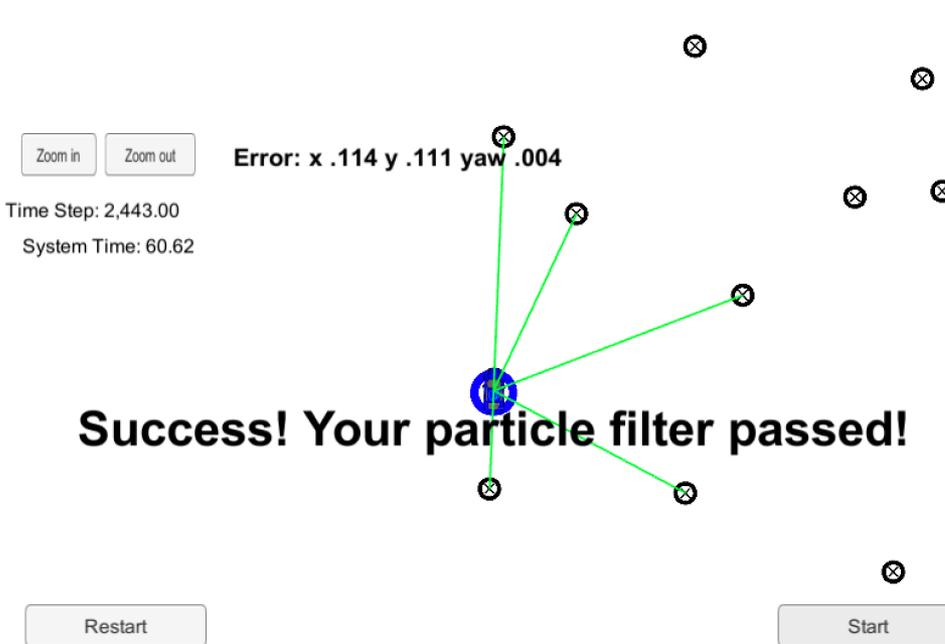
Job: Udacity Self-Driving Engineer project (Sep 2017).





## Personal & Professional Projects.

### Particle Filter Locator Implementation.



```
PARTICLE_FILTER > ... > particle_filter.cpp > ParticleFilter::getSenseY(Particle best) < >

// calculate weight for this observation with multivariate Gaussian
//P(x,y)=[1/(2π*rx*ry)] * e-{[(x-ux)^2/(2*rx^2)] + [(y-uy)^2/(2*ry^2)]}
double obs_w = common_factor * exp(-(pow(x-ux,2)/(rx2) + (pow(y-uy,2)/(ry2))));

//increment weight
particles[index_particles].weight *= obs_w;
if(DEBUG)
    cout << "Weight " << index_particles << ": " << particles[index_particles].weight << endl;
}
}
if(DEBUG){
    cout << "Final weights" << endl;
    for(int index_particles=0; index_particles<particles.size(); index_particles++){
        cout << "Particle " << index_particles << " (id, weight) = " << particles[index_particles].id << ", " << particles[index_particles].weight << endl;
    }
}
}

/**
 * resample Resamples from the updated set of particles to form
```

Personal project: Particle Filter based on landmarks that locates an object with an error of less than 0.12 meters. It can be used to precise location in indoor & outdoor environments.

<http://www.agomgon.com/profile/ParticleFilter.mov.zip> (\*)

Technologies: C++, Markov localization, SLAM.

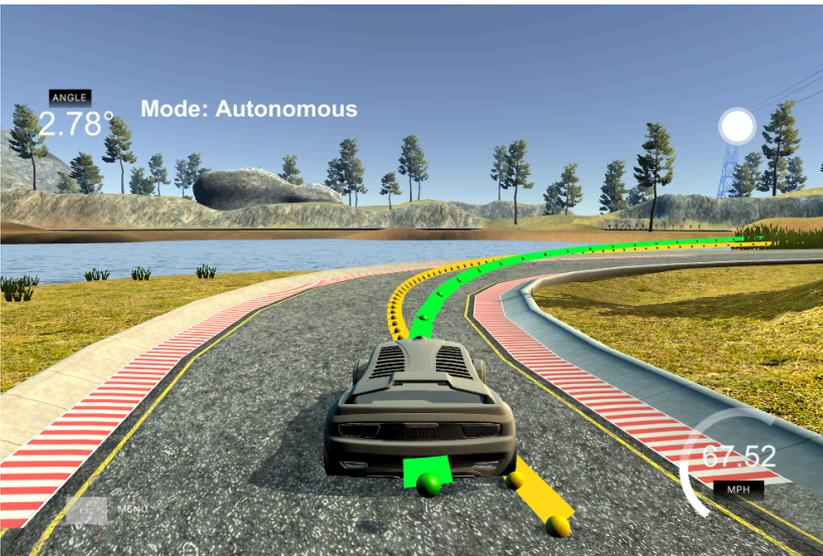
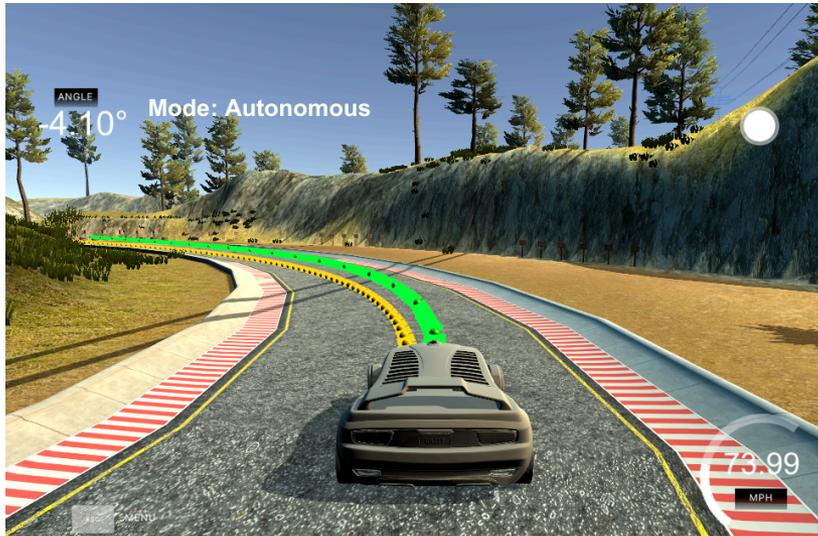
Job: Udacity Self-Driving Engineer project (Aug 2017).

(\*) Note that capturing the video jeopardized the Particle Filter CPU iterations. The circle is the predicted position, the car icon is the real position.



## Personal & Professional Projects.

# MPC real-time Controller for Vehicles



Personal project: MPC real-time controller with less than 100ms latency that calculates the steering angle, throttle and break which drives the car up to 125 km/h. The vehicle works with a real world model (mass, inertia, friction, etc).

<http://www.agomgon.com/profile/MPC.mov.zip>

Technologies: C++, control theory

Job: Udacity Self-Driving Engineer project (Jul 2017).

```
MPCC > Sources > mpc > Source Files > MPC.cpp > No Selection
// The idea here is to constraint this value to be 0.
//
// Recall the equations for the model:
// x[t] = x[t-1] + v[t-1] * cos(psi[t-1]) * dt
// y[t] = y[t-1] + v[t-1] * sin(psi[t-1]) * dt
// psi[t] = psi[t-1] + v[t-1] / Lf * delta[t-1] * dt
// v[t] = v[t-1] + a[t-1] * dt
// cte[t] = f(x[t-1]) - y[t-1] + v[t-1] * sin(epsi[t-1]) * dt
// epsi[t] = psi[t] - psides[t-1] + v[t-1] * delta[t-1] / Lf * dt
fg[1 + x_start + t] = x1 - (x0 + v0 * CppAD::cos(psi0) * dt);
fg[1 + y_start + t] = y1 - (y0 + v0 * CppAD::sin(psi0) * dt);
fg[1 + psi_start + t] = psi1 - (psi0 + v0 * delta0 / Lf * dt); //note the -v0*delta_t
fg[1 + v_start + t] = v1 - (v0 + a0 * dt);
fg[1 + cte_start + t] = cte1 - ((f0 - y0) + (v0 * CppAD::sin(epsi0) * dt));
fg[1 + epsi_start + t] = epsi1 - ((psi0 - psides0) + v0 * delta0 / Lf * dt);
}
```

## Personal & Professional Projects.

# Vehicle detection with Deep Learning & Computer Vision

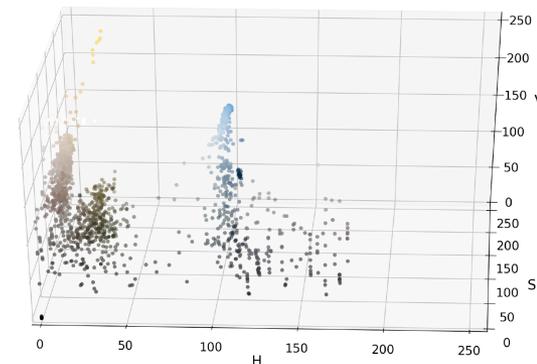
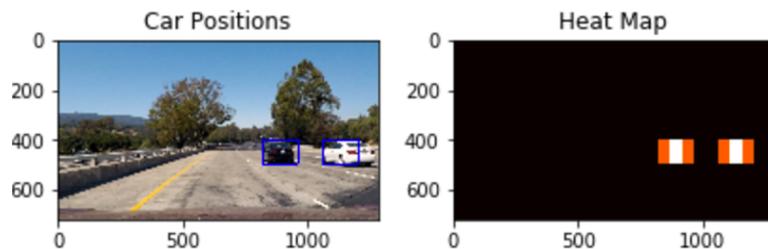
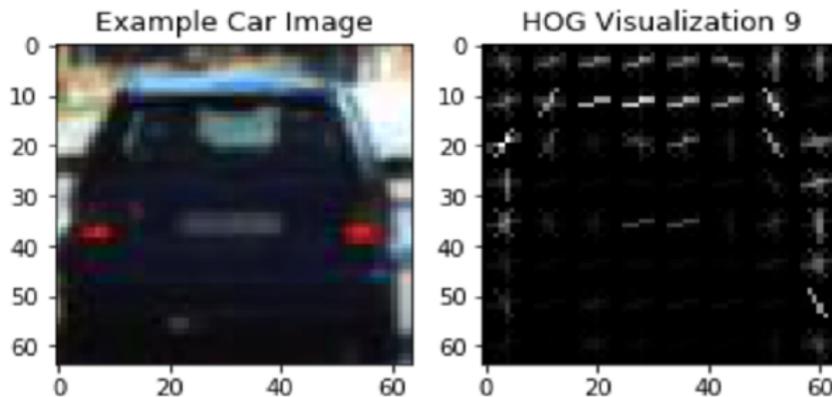


Personal project: Deep Learning and Computer Vision applied to detect nearby moving vehicles with the histogram of gradients + AI classification algorithms.

<http://www.agomgon.com/profile/vehicleDetectionProject.mp4.zip>

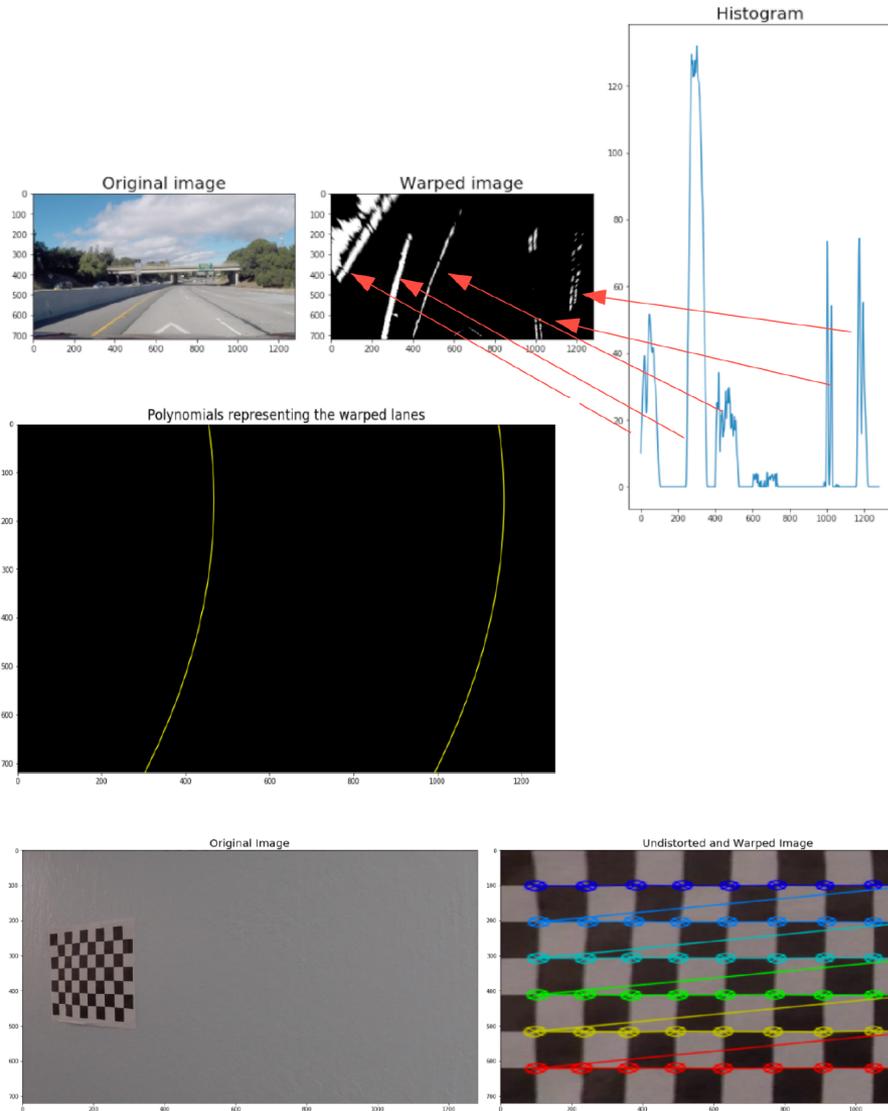
Technologies: Tensor Flow, Keras, Open CV, Matplot, Scikit, Python, Signal Theory.

Job: Udacity Self-Driving Engineer project (Jun 2017).



## Personal & Professional Projects.

### Advance path finding and lane position



Personal project: Computer vision program that finds the lanes of the road, road radii and the relative position of the car on the road just with the video of a camera as the input.

<http://www.agomgon.com/profile/advanceLanesFinder.mp4.zip>

Technologies: Open CV, Matplot, Python, Signal Theory.

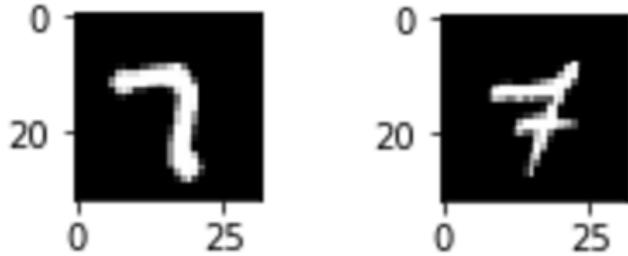
Job: Udacity Self-Driving Engineer project (May 2017).



## Personal & Professional Projects.

### OCR based on Deep Learning

This is a 7 This is a 7



```
validation_accuracy = evaluate(X_validation, y_validation)
print("EPOCH {} ...".format(i+1))
print("Validation Accuracy = {:.3f}".format(validation_accuracy))
print()

saver.save(sess, './lenet')
print("Model saved")
```

Training...

EPOCH 1 ...  
Validation Accuracy = 0.971

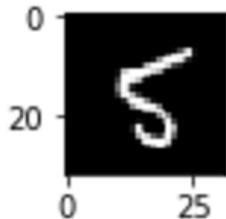
EPOCH 2 ...  
Validation Accuracy = 0.980

EPOCH 3 ...  
Validation Accuracy = 0.987

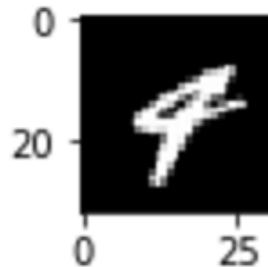
This is a 3



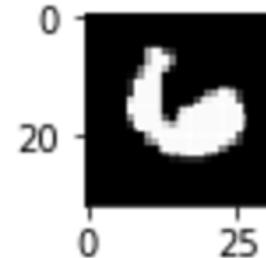
This is a 5



This is a 4



This is a 6



Personal project: Convolutional Neural Networks applied to OCR. Taking a handwritten digit, the network is able to classify it correctly with an accuracy of more than 99.8%.

Technologies: Tensor Flow, Python.

Job: Udacity Self-Driving Engineer project (Jan 2017).

## Personal & Professional Projects.

### Behavior cloning with Deep Learning



Personal project: Deep Learning applied to cloning behavior into a Convolutional Neural Network to drive a car inside a closed circuit. In the video you can see a car simulator sending the steering wheel, breaks and throttle data to the vehicle's controller according to the output of the neural network.

<http://www.agomgon.com/profile/behaviorCloning.mp4.zip>



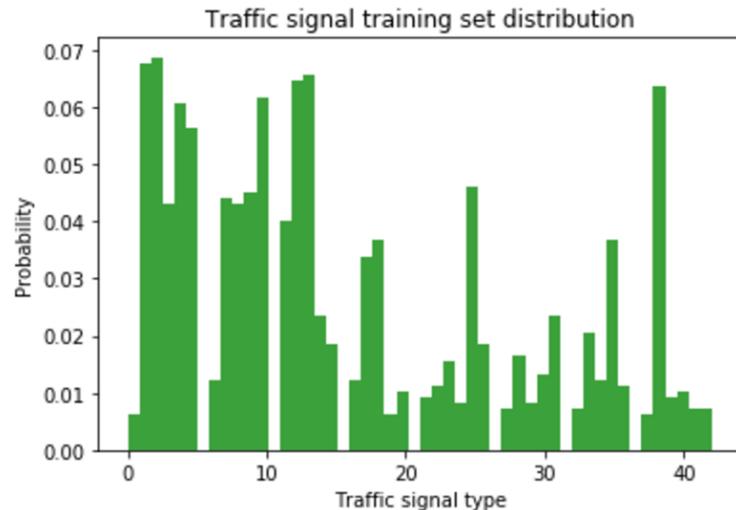
Technologies: Tensor Flow, Keras, Open CV, Matplot, Python, Signal Theory.

Job: Udacity Self-Driving Engineer project (Mar 2017).

```
from keras.models import load_model
def cropping_lenetDataUpgrade(x,y,shape,split):
    print('Training with cropping LeNet')
    t = time.time()
    model = load_model('model.h5')
    model.compile(loss='mse', optimizer='adam')
    model.fit(x, y, batch_size=BATCHSIZE, epochs=EPOCHS, validation_split=split, shuffle=True)
    print('Done: ' + str(time.time()-t) + ' seconds.')
    model.save('modelUpgraded.h5')
```

## Personal & Professional Projects.

# Traffic signal classifier with Deep Learning



Personal project: Deep Learning applied to classify traffic signs. 43 different signs with a testing accuracy of more than 96,1%

Technologies: Tensor Flow, Keras, Open CV, Matplot, Python, Signal Theory.

Job: Udacity Self-Driving Engineer project (Feb 2017).

```
#Run the predictions
with tf.Session() as sess:
    saver.restore(sess, tf.train.latest_checkpoint('.'))
    newImagesPrediction = sess.run(logits, feed_dict={x:images})
    print("newImagesPrediction: " + str(type(newImagesPrediction)) + " " + str(newImagesPrediction.shape))

predicted_results = []
for indexImage in range(newImagesPrediction.shape[0]):
    indexMaxProb=-1
    maxProb=-1
    for indexPossibleAnswer in range(newImagesPrediction.shape[1]):
        if maxProb < newImagesPrediction[indexImage][indexPossibleAnswer]:
            indexMaxProb=indexPossibleAnswer
            maxProb=newImagesPrediction[indexImage][indexPossibleAnswer]
    predicted_results.append(indexMaxProb)
    print("Max prob for image number " + str(indexImage) + " is " + str(indexMaxProb))

newImagesPrediction: <class 'numpy.ndarray'> (5, 43)
Max prob for image number 0 is 1
Max prob for image number 1 is 38
Max prob for image number 2 is 33
Max prob for image number 3 is 11
Max prob for image number 4 is 14
```

```
import tensorflow as tf
```

```
tf.reset_default_graph()
```

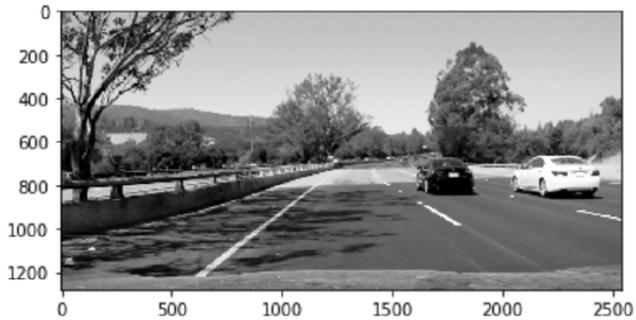
```
EPOCHS = 6
```

```
BATCH_SIZE = 256
```

```
from tensorflow.contrib.layers import flatten
```

## Personal & Professional Projects.

### Simple path line detection with Computer Vision

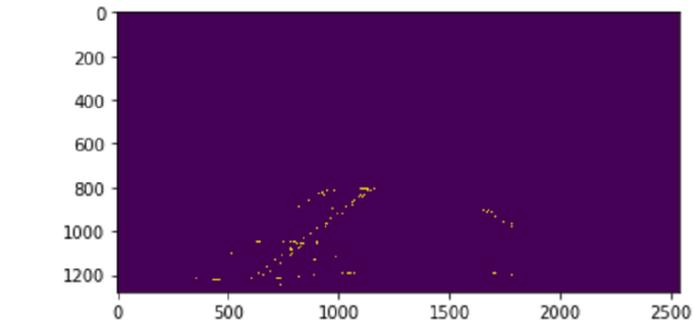


Personal project: path line detection and video processing. The computer vision software takes images as input and it draws the input plus the lane borders as the output.

[http://www.agomgon.com/profile/simplePathDetection\\_output.mp4.zip](http://www.agomgon.com/profile/simplePathDetection_output.mp4.zip)

Technologies: Open CV, Matplot, Python, Signal Theory.

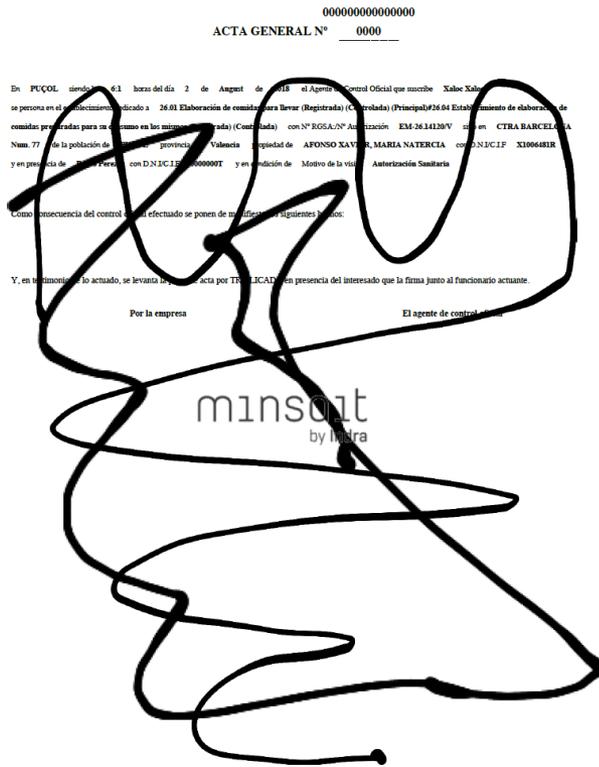
Job: Udacity Self-Driving Engineer project (Feb 2017).



# Personal & Professional Projects.

## ImSign for Android

minsait  
by Indra



Application that signs documents with an advance biometric signature (graph + speed + pressure if available) and encrypts the biometry with a public-private key system. The application can be configured to build roll-outs of itself to different clients or to be used as a library.

Technologies: Android.

Jobs: analyst developer (May 2018 - Jul 2018).

# Personal & Professional Projects.

## GDRP migration



**DETALLE DE LA SOLICITUD**

Datos de la solicitud

Id. Solicitud: 7106      Código de Asistencia:      Estado de accionamiento:  Pendiente  Aceptada  
 Avería: Bateria      Fecha y hora: 17/05/18 18:45

Guardar

---

Datos del Siniestro

Id. Cliente: 26013      Nombre: \*\*\*\*      Apellidos: \*\*\*\*  
 Teléfono: \*\*\*\*      Correo electrónico: \*\*\*\*

Marca: \*\*\*\*      Modelo: \*\*\*\*      Color: \*\*\*\*  
 Nº de bastidor: \*\*\*\*      Matrícula: \*\*\*\*      Nº de póliza: \*\*\*\*  
 Nombre de la compañía: RDGP

Dirección: \*\*\*\*  
 Localidad: \*\*\*\*  
 Provincia: \*\*\*\*  
 Barrio: \*\*\*\*  
 País: \*\*\*\*

Otros Datos:  
 \*\*\*\*

Geolocalizado por GPS:       Ir a dirección

Migration of several server and mobile apps due to the European General Data Protection requirements (<https://www.boe.es/doue/2016/119/L00001-00088.pdf>) of May, 25th 2018.

Technologies: JEE, Oracle, Android, iOS (only analyst).

Jobs: analyst developer. (Jan 2018 - May 2018).

7023	02/03/18 18:50	234 234	Waterloo	123123	Carencia combustible	MAPFRE
7024	02/03/18 18:50	234 234	Waterloo	123123	Carencia combustible	MAPFRE
7025	02/03/18 18:51	234 234	Waterloo	123123	Carencia combustible	MAPFRE
7026	06/03/18 19:29	234 234	Waterloo	123123	Carencia combustible	MAPFRE
7087	30/04/18 21:41	LLL LLL	Tarancon	ABCD	Bateria	RDGP
7090	09/05/18 13:02	JJJ KKK	Munera	LL	Bateria	RDGP
7091	09/05/18 17:27	KK LL	Munera	LLL	Bateria	RDGP
7093	10/05/18 17:42	KK LL	Munera	LLL	Bateria	RDGP
7106	17/05/18 18:45	**** ****	****	*****	Bateria	RDGP
7107	17/05/18 18:48	**** ****	****	*****	Bateria	RDGP
7108	17/05/18 19:10	JJJ KKK	Munera	KKK	Bateria	RDGP
7109	18/05/18 08:27	GGGG HHHH	Munera	MMM	Bateria	RDGP
7110	18/05/18 09:38	MMM MM	Munera	MMM	Bateria	RDGP
7112	18/05/18 10:41	MMM MMMM	Munera	MMMM	Carencia combustible	RDGP
7113	21/05/18 17:34	TEDT TEDT		TEST	Bateria	GENERAL MOTORS
7114	22/05/18 12:15	TEST TEST	Alcobendas	TEST	Bateria	GENERAL MOTORS
7115	22/05/18 12:18	M M	Munera	MM	Bateria	RDGP
7116	22/05/18 12:18	TEST TEST	Alcobendas	TEST	Bateria	GENERAL MOTORS
7117	22/05/18 16:51	TEST TEST	Munera	M	Carencia combustible	RDGP
7118	24/05/18 10:04	**** ****	****	*****	Carencia combustible	RDGP
7119	24/05/18 10:06	**** ****	****	*****	Bateria	RDGP
7120	24/05/18 10:07	**** ****	****	*****	Llaves perdidas	RDGP
7127	28/05/18 12:12	HHH JJJ	Munera		Bateria	RDGP
7128	28/05/18 12:15	HHH JJJ	Munera		Bateria	RDGP
7129	28/05/18 12:20	HHH JJJ	Munera		Bateria	RDGP
7144	29/05/18 11:39	**** ****	****	*****	Bateria	RDGP
7160	31/05/18 15:42	TEST TEDT	Alcobendas	YEST	Pruebas SD00647967	GENERAL MOTORS
7161	31/05/18 16:01	TEST TEDT	Alcobendas	YEST	Bateria	GENERAL MOTORS
7162	31/05/18 16:46	TEST TEDT	Alcobendas	YEST	Bateria	GENERAL MOTORS

# National Bets & Lottery online client



Spanish official National Bets & Lottery **online** client.

The user can play up to 9 official games (including EuroMillions) online, check the results, store their favourite bets, online payments, fingerprint login, PUSH notifications, voice commands, and more. <https://www.loteriasyapuestas.es/es/app-selae>

Technologies: AngularJS + Ionic, native plugins (iOS + Android).

Jobs: analyst developer (Jan 2018 - Jul 2018).

# National Bets & Lottery QR client



Spanish official National Bets & Lottery **offline** client which generates the QR codes to be scanned by Lottery & Bets official shops.

The user can play up to 9 official games (including EuroMillions), store their bets, generate the official QR codes, receive PUSH notifications, check the prizes with the camera and the official QR code.

Technologies: Angular 4 + Ionic 3, native plugins (iOS + Android).

Jobs: analyst developer (Oct 2017 - Feb 2018).

## Online Stocks Management

**INDITEX**

Online Stocks Management is the mobile application and back-end that manages all the articles in Inditex's shops around the world. 8000+ shops and daily orders of M€.

Technologies: Android, iOS, JEE, DB2

Jobs:

Technical manager,  
Mobile Android - analyst developer,  
Mobile iOS - analyst,  
Back-End - analyst  
(Jan 2016 - Oct 2017).

**Confidential**

## Common architecture and components

Design of a common architecture for hybrid development.  
Development of common components for Renfe's artifactory: Login, data synchronization, push notifications, fingerprint, pdf viewers, beacons, master-view detail, infinite scroll, grids, alerts and more.

**Confidential**

Technologies: Cordova, Ionic 1, IBM Mobile First, Android, JS

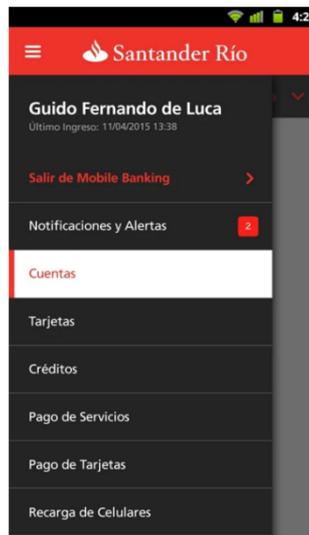
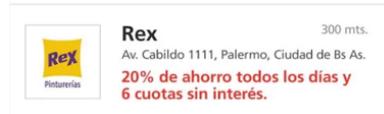
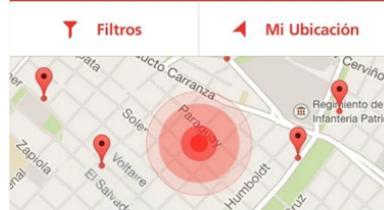
Jobs:

Technical manager,  
IBM Mobile First - analyst developer,  
Mobile Android - analyst developer,

(Aug 2016 - Jan 2017).

# Santander Río

<https://www.santanderrio.com.ar>



Santander Río is the Santander Bank mobile application in Argentina for 2.5 million of potencial users (estimated release on November).

The Android and iOS users will be able to access all the bank services: from the global position to services payment, cards management, transfers, credits and more.

The cashiers and bank promotions are easier to search with the integrated map manager.

The application also cares for handicapped people incorporating a speech reader.

Technologies: Android , iOS, Twin Push, Google Analytics.

Job: technical manager, Android analyst developer (Feb 2015 - Jan 2016).

## POC Moviman (Red Eléctrica de España)

<http://www.ree.es/en>



Proof of Concept & Prototype of Moviman: a workforce tool for REE's field workers. The tool is able to help in the maintenance of the electrical grid by geolocation, maps, NFC technologies and QR codes.

**For security reasons, can not provide further information.**

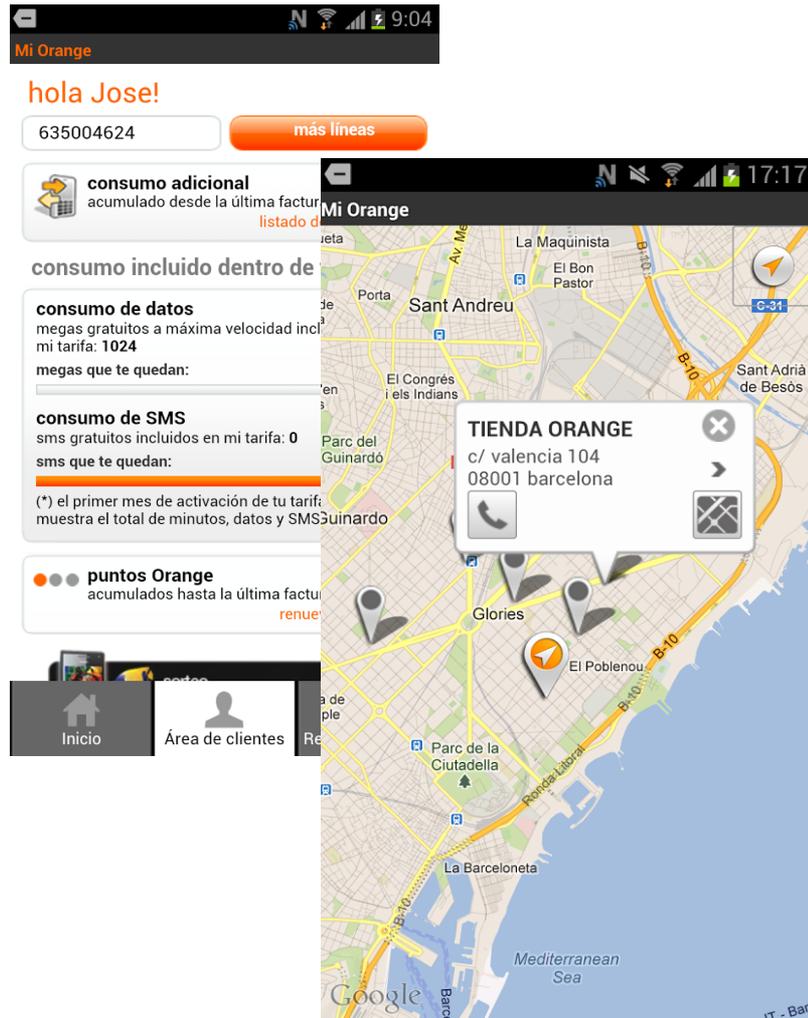
**Confidential**

Technologies: JEE, Android, Worklight y SAP (JEE queries to SAP).

Jobs: Analyst developer Android, JEE and SAP (only queries from JEE to SAP). (Jul 2015 - Aug 2015).

# Mi Orange

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



Application upgrades of Mi Orange (<http://movil.orange.es/miorange-app/>)

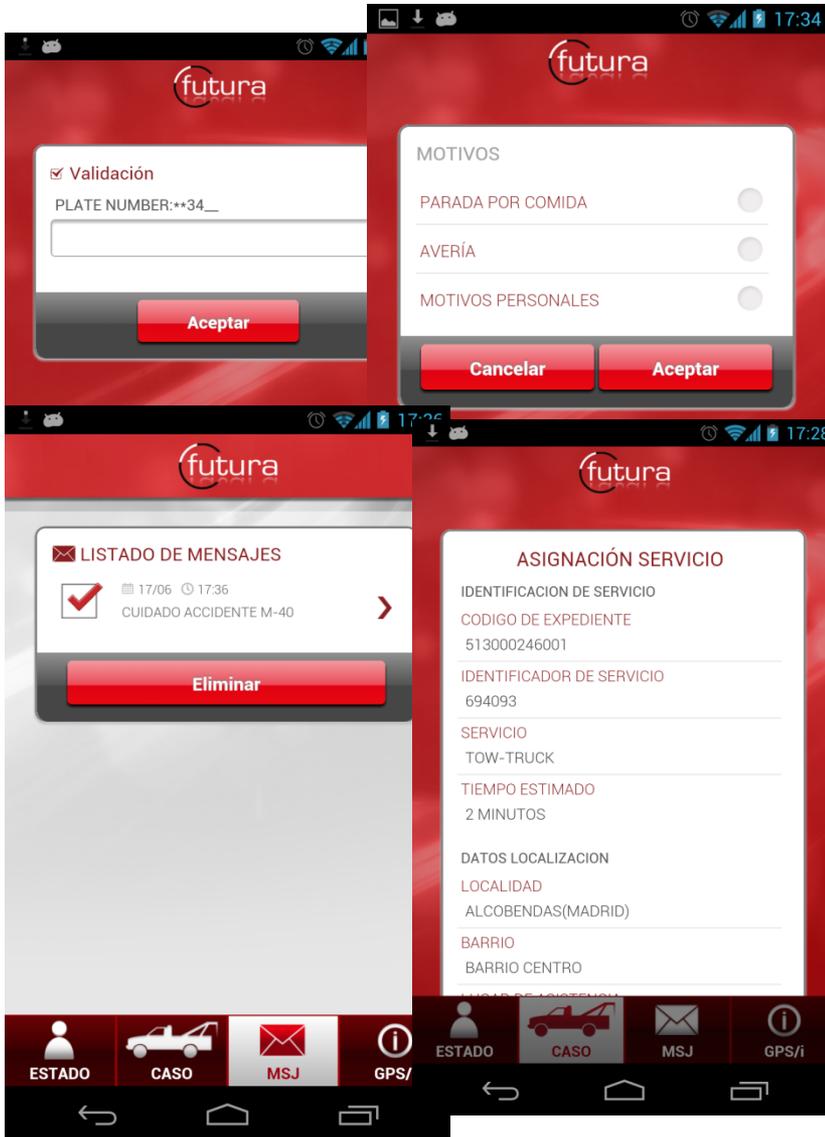
The app controls the landlines or the mobile lines of Orange clients.

Technologies: Android, Blackberry Java.

Jobs: Android & Blackberry analyst developer (Jan 2015 - Feb 2015).

# Futura

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



Futura is a mobile application that tracks MAPFRE Asistencia's assistance vehicles in 15 countries.

Rewarded with Autelsi award.

It sends the location to a front end and it receives commands from the server.

Technologies: PhoneGAP, Android, iOS (only analyst), Blackberry, html, javascript.

Jobs: tech manager, Analyst-Developer PhoneGAP, Blackberry, Android (Feb 2011 - Feb 2014, Apr 2017 - current).



# Out Of Office

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

Out Of Office is a mobile application for MAPFRE employers to access all the information about their employees offline.

It also manages the calendar of the employers and employees.

The application is capable of downloading information upgrades through a LDAP repository.

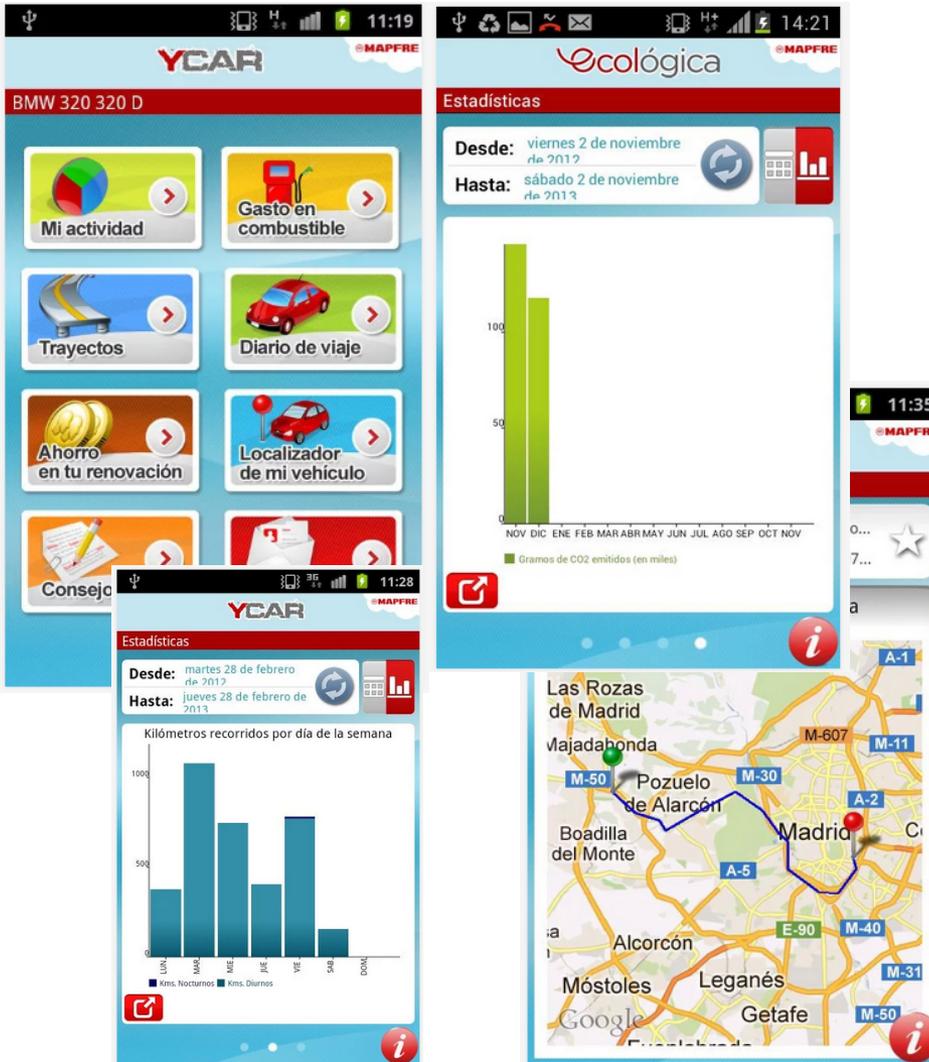
Technologies: iOS (only analyst).

Jobs: tech manager (Feb 2011 - Jan 2014).



# YCAR and Póliza Ecológica

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



YCAR and Póliza Ecológica are two mobile applications which read travel information of MAPFRE clients subscribed to Pay As You Drive program. It also serves the driver as trip manager, optimises fuel consumption and obtains the driver profile.

The application reads the location from a kerberized server.

Technologies: iOS (only analyst), Android.

Jobs: tech manager, Android analyst-developer , iOS Analyst (Mar 2012 - Jan 2014).



# MAPFRE en tu Smartphone

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



MAPFRE en tu Smartphone (<http://www.mapfre.com/seguros/es/particulares/movil/aplicacion-mapfre-movil.shtml>) is a swiss knife that MAPFRE has published for their clients.

The user can simulate prices for different products, consult all the MAPFRE information from garage to medical services, open any issue from a simple query to and accident with photos query.

Technologies: iOS(only analyst), Android.

Jobs: tech manager, Analyst-Developer Android (Mar 2011 - Jan 2014).



# MAiAssist

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



MAiAssist is a mobile + back-end application that solves road-assistance requests.

The mobile app sends the location and assistance request. Also, it allows the user to watch the assistance vehicle location.

The back-end receives the requests and processes them automatically or manually. The back-end has 4 operating roles to configure the system itself or to process the assistance requests.

Technologies: Android, iOS (only analyst), Blackberry, JEE, Oracle, Jboss, Symbian.

Jobs: tech manager, Android, Blackberry and backend analyst developer (Feb 2011 - Feb 2014, Apr 2017 - current).

# Carrefour Financial Services

<http://carrefour.com/>



It is a mobile + back-end application which Carrefour Financial Services uses to speed up the sign-up of new users of its financial services with an advance signature procedure.

**For security reasons, can not provide further information.**

Technologies: JEE, iOS(only analyst), Oracle, Mobile Iron.

Jobs: Java analyst developer (Aug 2016 - Oct 2016).

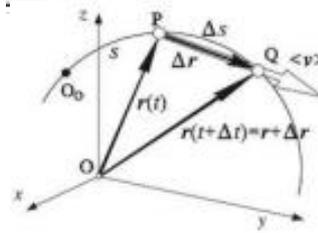
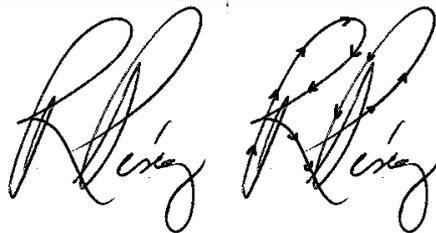


Imagen      Trazo      velocidad

## Personal & Professional Projects.

# CITI Bank Tarjeta Oro

<https://online.citibank.com>



Tarjeta de Crédito Citi Oro

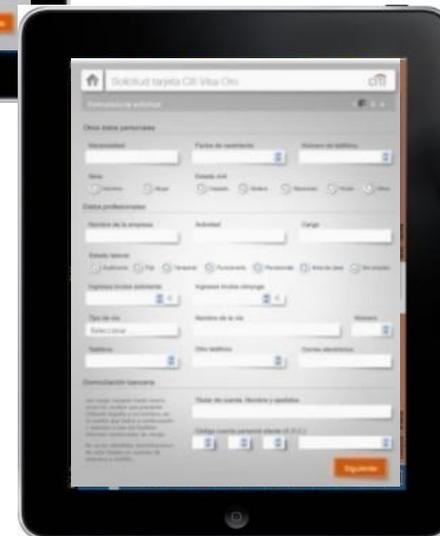
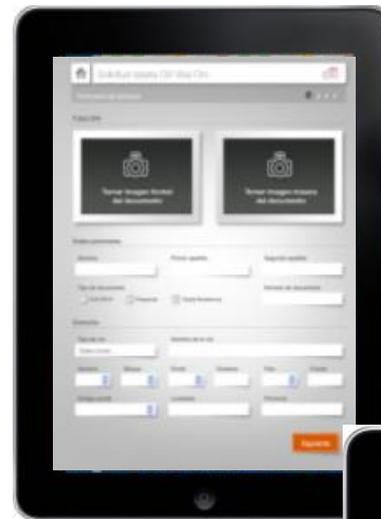
It is a mobile + back-end application which CITI Bank (and Banco Pastor after) uses to speed up the sign-up of new users of its financial services with an advance signature procedure.

The time is reduced from 15 days at the request of cards to 3 days thanks to the digital signature certification (advanced digital handwritten signature).

**For security reasons, can not provide further information.**

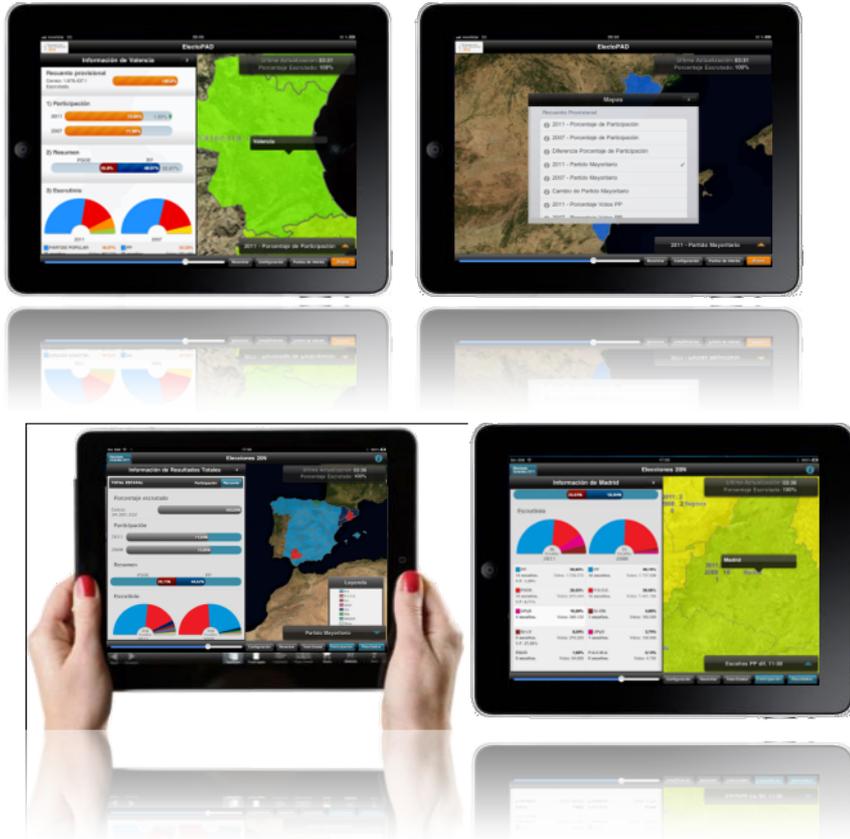
Technologiess: JEE, iOS (only analyst), Oracle, Mobile Iron.

Jobs: Java Analyst-Developer (Apr 2013 - Jul 2013).



# Procesos electorales

<http://www.interior.gob.es/>



Mobile + back-end application to show the national polls in Spain.

**For security reasons, can not provide further information.**

Technologies: iOS (only analyst), Android, Blackberry, Parse.

Jobs: system analyst (Aug 2011).

# MNET for DGT

**Confidential**

MNET is the Spanish Official Government tool that allows the Traffic Section to edit the Spanish road maps. (<http://www.dgt.es/es/>).

Additionally it allows many operations such as route calculation base on 15 parameters in less than 1ms of time and with multiple waypoints or comparison with other maps and cartographic editions.

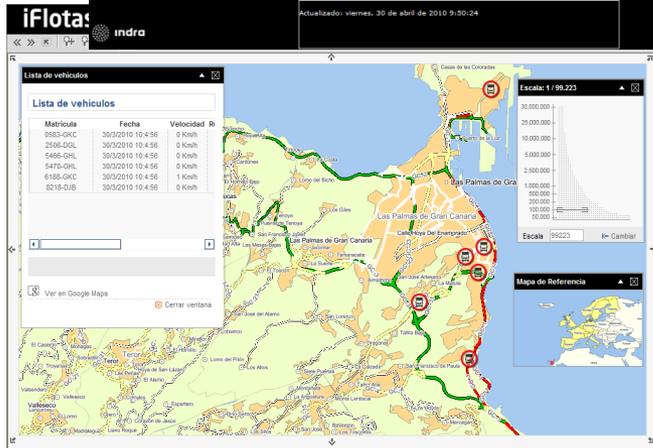
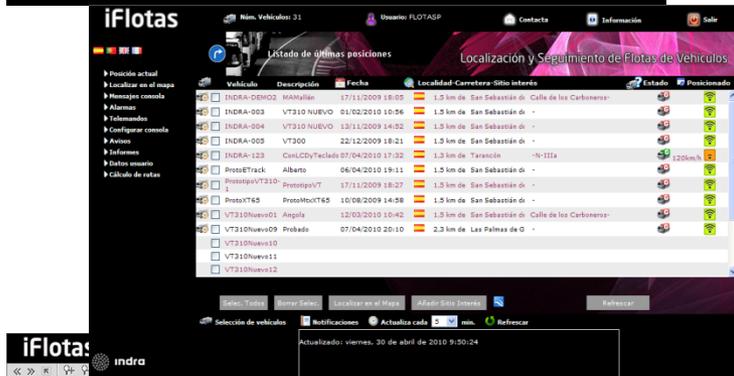
**For security reasons, can not provide further information.**

Technologies: C#, ArcGIS, Oracle, Network Analyst.

Jobs: .NET developer (Apr 2010 - Feb 2011).

# iFlotas

<http://www.edpenergia.es/>



iFlotas is a real-time location system of mobile elements through the integration of GPS trackers.

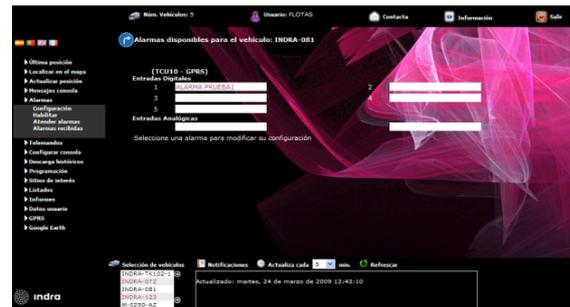
The system can read measures such as temperature, door opening, panic buttons, etc.

It can read the vehicle's CANBus if available.

The system can send messages and control elements like the claxon, battery switch or the motor control.

Technologies: JEE, C#, Oracle Spatial, PostGRE SQL, Tomcat, Google Maps, electronic devices.

Jobs: tech manager, Backend Analyst Developer, Electronic Engineer (May 2008 - Apr 2010).



# ALLIANCES

Approved for Technical Reference partnership with Apple enterprise-level certifications and personnel covering the entire life cycle of any project.

(Tech coordinator 2013)



Authorised Systems Integrator



Distribuidor Autorizado



Certified  
Technical Coordinator



Certified Pro

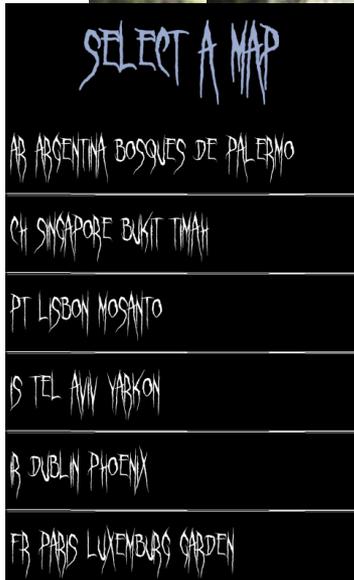


Certified  
Support Professional



## Personal & Professional Projects.

# Malber's SlenderMan (for Android)

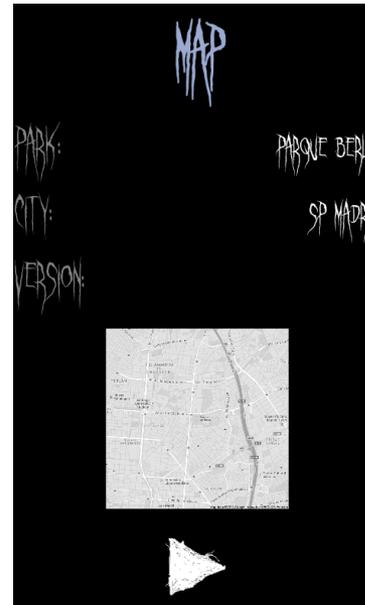


Personal project: Augmented reality survival horror videogame. The game shows tracks on the screen when the user enters a geofence in the real world.

Technologies: Android.

Jobs: co-Creator, analyst developer (Nov 2015 - Mar 2016).

<https://play.google.com/store/apps/details?id=com.malber.slenderman>



nearby parks. Make sport, enjoy with friends: take all the notes but be careful, Slenderman is waiting for you. Developed by:

Marta Ballesteros Solana  
marta@malber.net  
Luis Alberto Gómez González  
alberto@malber.net

**Thanks**  
Parsec Productions - MARK J. HADLEY

The typography used has been created by:  
Sinister Visions

The sounds used in the application has been obtained from:  
Soundbible  
VideoBlocks  
FreeSFX

# Personal & Professional Projects.

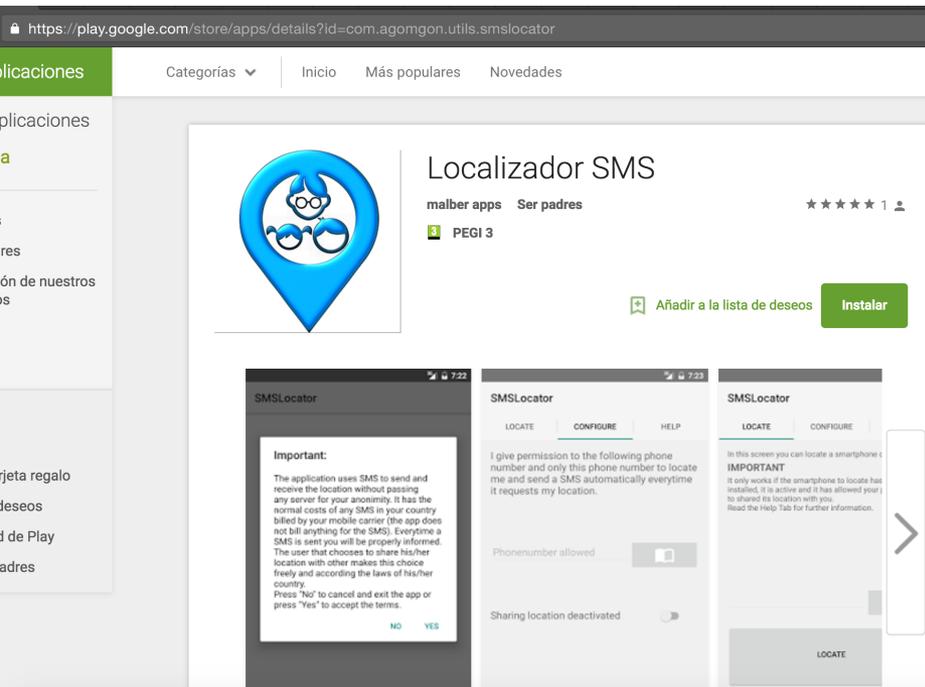
## SMS Locator (para Android)

Personal project: mobile application to locate people, specially elder and kindred, in low coverture environments. The app works as server or client and does not need a middle server.

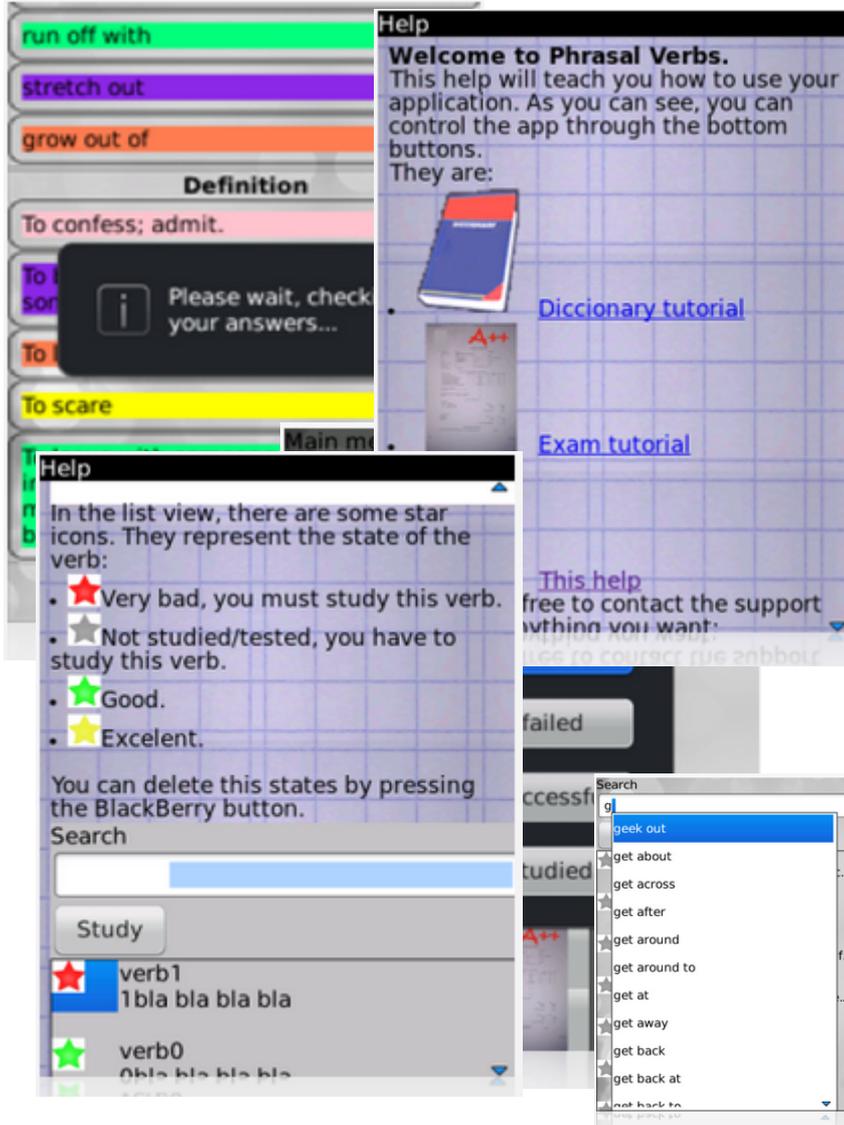
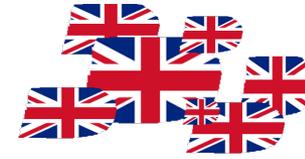
Technologies: Android, AdMob.

Job: analyst - developer (May 2016 - Aug 2016).

<https://play.google.com/store/apps/details?id=com.agomgon.utils.smslocator>



# Phrasal Verbs



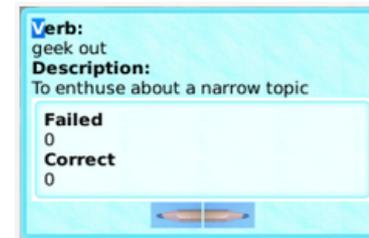
Personal project: phrasal verbs is a mobile application to teach English phrasal verbs.

It has different dictionaries, study mode, exam mode by definition or association and help.

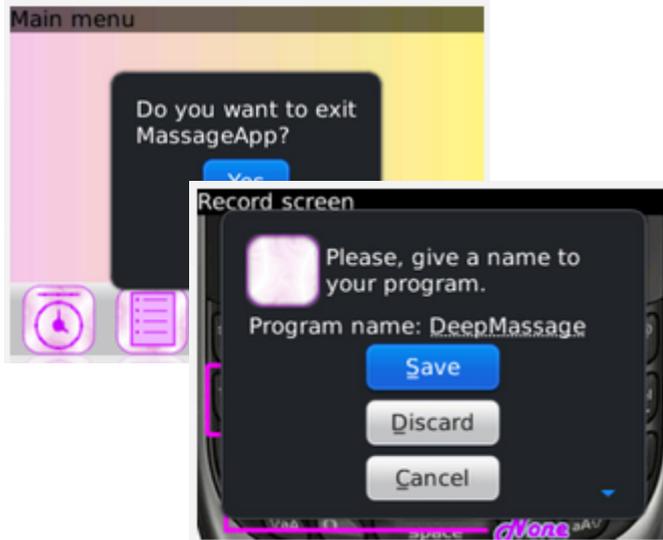
Technologies: Blackberry Java.

Jobs: analyst developer (Jan 2013 - Feb 2013).

<https://appworld.blackberry.com/webstore/content/20321494/?lang=es&countrycode=ES>



# Message App & Message App Trial



Personal project: Message App is a mobile application to massage the user with the smartphone.

The app offers various programs:

- Quick .
- Modes with fixed programs.
- And one way to create programs that the user desires.

Technologies: Blackberry Java.

Jobs: analyst developer (Mar 2013 - Apr 2013).

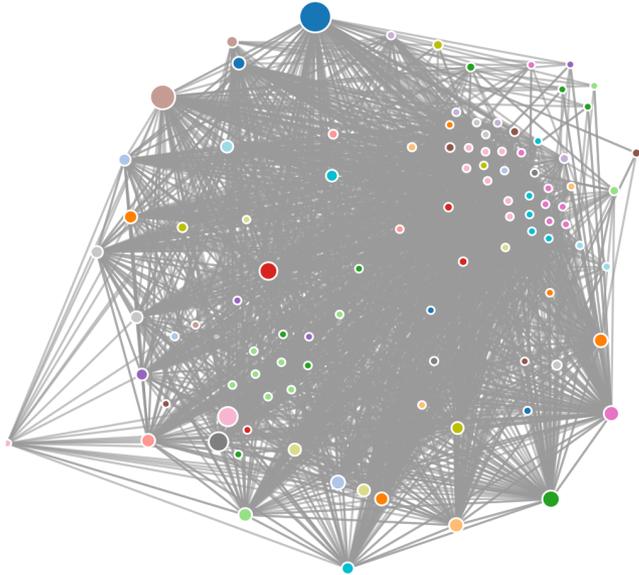
<https://appworld.blackberry.com/webstore/content/130398/?lang=es&countrycode=ES>



## Personal & Professional Projects.

### Web crawler linker to big data

Starting url: <http://www.marca.com>



Personal project: web crawler that tests the links on a site, feeds a big data engine and represents its results on a graphic user interface.

Technologies: Python, sqlite, html, js

Job: Analyst Developer (Dec 2016).