

# Asier Alcaide Martínez

# Profile

Double bachelor degrees in Business Management and Computer-IT Engineering at the University Carlos III of Madrid, I am a Software Engineer with more than 3 years of experience. I have designed and developed from API/RESTs services in Python and Java with no-SQL, to deep neural networks with very competitive researchers, by using different tools like pure Tensorflow, or Keras, creating new facial biometric verification approaches based on state-of-the-art deep learning models. I still like to code many different and new disruptive stuff where I can learn and play with.

In 2018 I moved to Finland for academic and personal purposes, where I gained a strong knowledge in many Artificial Intelligence fields, especially in Machine Learning.

I worked as a freelance developer in September 2020, and on a few personal projects related to biometric verification systems and financial value-adding products.

I'm currently working for the European Central Bank, trying to enhance some old statistical systems.

For more info, don't hesitate to have a look at my website! <u>https://www.asieralcaide.com/</u>

# **Employment History**

Big Data Engineer at UltraTendency, Berlin

August 2021 – Present

- *SPACE Project (European Central Bank)* – *October 2021 to Present.* Developing multiple solutions in the QA Team for a large and crazy project. People from all over Europe worked in a new statistical system for ECB. Using Python Notebooks with PyTest lib.

- *HUK-Coburg* – *September to December 2021*. Developing a real time crash notification system from customers. Using Kafka consumers and producers, HBase connections, SOAP and REST Endpoints.

## Details

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# Skills

Tensorflow Python/Numpy/Pandas REST/API Keras Sci-Kit Learn Docker Docker Kubernetes GCS/Microsoft Azure GCS/Microsoft Azure Soft Aafka Flutter CD/CI tools (Jenkins) Java/Bazel/Vertx/Spring Spark Scala

# Languages

English Spanish French

### Freelance / Self-employed with MásMóvil, Madrid

September 2020 – August 2021

- After being working as MasMovil internal employee, I decided to move to Belgium in February 2020. On September of that year, I started to offer my services as an independent Software Engineer for the company.

- I learnt how to build data transferring services from multiple origins and destinations, building configured scripts of Java with Vertx library, Bash/Shell (SSH), Kubernetes, Kafka, Google PubSub, etc.

### Backend Software Engineer at MásMóvil, Madrid

September 2019 – September 2020

- Worked in a from-scratch financial Big Data integration project for the company, developing scalable solutions to communicate and translate data with many structures (JSON, YAML, XML, internal data protocols...).

- Designed and implemented REST/APIs in asynchronous libraries of Java such as Vertx, in Google's package manager Bazel.

- Additional tools used: SQL (Google Big Query), messaging systems (GooglePubSub, Kafka), Docker-Compose, Git, Agile (Jira Atlasian), Airflow.

### Big Data - DevOps Engineer at BQ – MásMóvil, Madrid

June 2019 – August 2019

- Developed state of the art software in a Data Warehousing team. Designing new big and demanding-scalable infrastructure data management.

- Tools used: Docker, Kubernetes, Helm, Google Cloud Storage, BigQuery, CloudBuild, etc.

### Machine Learning Internship at BQ, Las Rozas, Madrid

February 2018 – August 2018

- Designed and developed new Deep Neural Network algorithms based in facial recognition and verification problems.

- Designed a new model: LIPSNN (Light Intrusion-Proving Siamese Neural Network). It is based on the Siamese Convolutional Neural Network architecture.

### Waiter at Foster's Hollywood, Palencia

July 2016 - September 2016

# Courses

#### Curso Básico de Marketing Digital, AIB Spain

August 2016 - September 2016

#### Curso de Cloud Computing, Escuela de Organización Industrial

November 2017 - December 2017

#### Creación de Modelos de Negocio

February 2018 - March 2018

# Education

Software Engineering - Computer sciences, Universidad Carlos III de Madrid, Colmenarejo September 2014 – January 2020

Business Administration, Universidad Carlos III de Madrid, Colmenarejo September 2014 – June 2020

### Computer Sciences - Business Administration, Tampere University, Tampere (Finland)

August 2018 - May 2019

Studied in Finland for 10 months, learned many different academic courses such as Strategic Management, Pattern Recognition and Machine Learning, Supply Chain Management, Financial Engineering, Knowledge Mining and Big Data, SW Engineering Methodologies, etc.

Participated in a Kaggle ML competition, being 7 out of 100 groups, predicting robot surface detections.

# **Publications**

#### **Global Information Systems Management - The view on Smart Transformation: Consolidated Assignments from Spring 2019** Apr 12, 2019

In collaboration with Tampere University (TUT), Finland, this publication collects different adoptions and/or uses of particular emerging technologies that are taking part in our lives. In my case, our group and I have made a deep research and analysis on the "Artificial Intelligence, Augmented Reality and Mixed Reality in Cultural Venues" (p. 81).

### LIPSNN: A Light Intrusion-Proving Siamese Neural Network Model for Facial Verification

Nov 1, 2021

This paper presents the proposal of a new neural model, called Light Intrusion-Proving Siamese Neural Network, LIPSNN. This new light model, which is based on Siamese Neural Networks, is fully presented from the description of its two-block architecture, going through its development, including its training with the well- known dataset Labeled Faces in the Wild, LFW; to its benchmarking with other traditional and deep learning models for facial verification to compare its performance for its use in low computing resources systems for facial recognition.

# Projects

#### Investra - App

Dic 2020 - Present

New definitive personal investing app made with Flutter. Still in development, it allows you to visualize and control your financial situation in a better way (personal project).

### ByPay

Oct 2020 – August 2021

A personal project we tried. It consisted of a new disruptive payment method system where any physical payment could also be done with our face palms. We created an Android App in Flutter (ByPay).

#### **Deep Learning Laboratory Exercises Spring 2019**

Jan 2019 - May 2019

Laboratory Exercises by implementing Machine Learning skills at Tampere University of Technology (now called Tampere University). Exercises are based on "Audio Scene Classification", "Image Recognition" and "Generative Adversarial Networks", by using Python language and numerous libraries such as Keras, Tensor flow, SciKit-Learn, Numpy and Matplotlib.

### Facial Verification with Deep Learning algorithms

Jun 2018 – Aug 2018

Developing of new Deep Learning Al and architectures to enhance facial verification predictions (Deep Siamese Convolutional Neural Networks). TensorFlow low level implementation.