



# Mario Varona Bueno

iOS Engineer

MSc. in Business Intelligence and Big Data in Cyber-Secure Environments

MSc. in Cybersecurity



## About me

I have always been amazed by the possibilities offered by technology to change and improve people's lives.

Both self-taught and traditionally, I have learned about programming, testing, architectures, data science, security, communication or leadership to achieve it.

With discipline, lifelong learning, passion for software and teamwork, I would like to build accessible, usable, efficient and sustainable technology that enhances people's lives and inspire them to trust themselves.



## Education

### Universities of Burgos, León and Valladolid (2021 - 2023)

Interuniversity Master in Business Intelligence and Big Data in Cyber-Secure Environments

Average grade: 3.67/4 GPA (9.17/10).

Master thesis: Online recommendation system for Spanish municipalities based on user preferences and similarity across municipalities.

Master thesis' grade: 3.92/4 GPA (9.8/10).

### Complutense University of Madrid (2021 - 2022)

Master in Cybersecurity

Average grade: 3.64/4 GPA (9.1/10).

Master thesis: Design of a cybersecurity program for a startup.

### Munich University of Applied Sciences (2020)

Computer Networking and Secure Network Management

### Julius-Maximilians-Universität Würzburg (2019 - 2020)

One-year stay on Würzburg, Bayern, Germany

### University of Salamanca (2017 - 2021)

Computer Science Degree

Average high school scientific baccalaureate grade: 3.72/4 GPA (9.29/10).

Average degree grade: 3.33/4 GPA (8.32/10).

Member of the ACM USAL chapter since 2018.

Bachelor thesis: Integral system to perform on-board payments on public transport with and without NFC, platform to manage it, environment to test it, app to calculate avoided CO<sub>2</sub> and platform to notify user.

Bachelor thesis grade: A+ (10/10).



## Experience



### iOS Engineer (2022 - ...)

Badger Maps, Inc. - <https://www.badgermapping.com>

Seeking a significant qualitative leap in the iOS project, by including advanced mocking and testing tools, migrating critical code from Objective-C and UIKit to Swift and SwiftUI, detecting potential bottlenecks and providing proposals to reduce them.

Technologies and techniques used: Swift, SwiftUI, Objective-C, UIKit, TDD, BDD, DDD, SOLID principles, Clean Code, Clean Architecture, Continuous Integration.



## Skills

### iOS Development

- Swift
- Objective-C
- UIKit
- SwiftUI

### Android Development

- Java

### Big Data

- Python
- Pandas

### Web Development

- HTML
- CSS
- JavaScript
- jQuery
- PHP
- MySQL
- NoSQL (MongoDB, Firebase Realtime)
- Flask
- SEO

### DevOps / CI / CD

- Google Cloud Platform
- Heroku
- GitHub Actions
- Fastlane

### Agile Methodologies

- Scrum
- Kanban

### Communication

- Teamwork
- 🇪🇸 Spanish: Native
- 🇬🇧 English:
  - C1, OLS, 2019
  - B2, Cambridge FCE, 2016

- 🇩🇪 German:

- B2, Julius-Maximilians-Universität Würzburg, 2020



## Contact

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# Experience



**Junior iOS Engineer (2022 - 2022)**  
**Badger Maps, Inc.** - <https://www.badgermapping.com>

Work devoted to the development of the native iOS app, collaborating with the Web team in the API design, and reinforcing the security of the company through technical and process improvements.



**Mobile Engineer Intern (2021 - 2022)**  
**Badger Maps, Inc.** - <https://www.badgermapping.com>

Curricular, extracurricular and professional internships at the Californian startup BadgerMaps, Inc. through its engineering branch ZenZorrito Tecnologías S.L. Work on Mobile devoted to code and making decisions for the iOS and Android apps.

Featured projects:



**DondeTeEsperan (2023 - ...)** <https://dondeteesperan.es>

Online recommendation system for Spanish municipalities based on user preferences and similarity across municipalities. It is the first and only municipality recommender in Spain. It's powered by a hybrid recommendation system: content-based and collaborative-filter based, and handles 78 variables for the 8,131 Spanish municipalities. Due to its innovative nature and the problem it solves, it has been awarded by the University of Burgos and Castilla y León Regional Government.

Technologies and techniques used: Python, Pandas, Recommendation Systems, PHP, JavaScript, Flask, Jinja2, Google Cloud, GitHub Actions.



**BusPlus (2021 - ...)** <https://bmsalamanca.com/empresas>

Comprehensive system for passenger transport companies consisting of native mobile applications and Web platform developed to enable payment by transport card or with NFC compatible and non-NFC compatible mobiles. It has four components: app for end users on Android, app for end users on iOS, app for drivers and points of sale on Android and Web platform for transport companies.

The end users are the passengers, and they can pay without a card, top up their balance, pay with a non-personal card or with a personal card and register their trips to know how much CO2 they save with their trips on public transport.

Drivers receive mobile and card payments on board, and point-of-sale employees update card balances for users who want to top them up with cash.

Regarding management, the transport company's administrative employees control the information displayed to users, review the documentation they send to prove they are in possession of a single-person card, export statistics, and can perform operations at the individual card level.

Technologies and techniques used: NFC, Bluetooth, OTP, Swift, Java, PHP, MySQL, JSON, Firebase, HTML5, CSS3, Javascript, business plan, elevator pitch, copywriting, digital networking & marketing.



**BMS - App del Bus Metropolitano de Salamanca (2015 - ...)**  
<https://bmsalamanca.com>

First multi-platform app for the public intercity transport of Salamanca.

It has three components: Android app, iOS app and online platform used by the managing company Autobuses Salmantinos to upload notices about routes and convert them to PDF for its later view by users on the app.



# Courses

- iOS foundations for iPhone and iPad - KeepCoding
- Advanced iOS programming - KeepCoding
- Swift 3.0 foundations - KeepCoding
- Artificial Intelligence Foundations. Machine learning and neural networks - University of Salamanca
- Naming strategies: Naming your brand - Crehana
- A technological vision for business people - Udemy
- Android programming from scratch - KeepCoding
- The Complete 2020 Web Development Bootcamp - Dr. Angela Yu, London App Brewery - Udemy
- Complete 2020 Data Science & Machine Learning Bootcamp - Philipp Muellauer, Dr. Angela Yu, London App Brewery - Udemy
- iOS & Swift - The Complete iOS App Development Bootcamp - Dr. Angela Yu, London App Brewery - Udemy
- IV Cybersecurity Conference - Pontifical University of Salamanca
- Python with Django - Telefónica ProFuturo Foundation
- ISO 27001 Internal Auditor - TÜV NORD SPAIN (Cualicontrol)
- ISO 22301 Internal Auditor - TÜV NORD SPAIN (Cualicontrol)



# Volunteer experience

## Private English lessons

- 2016 - 2017
- Hermanas Josefinas de la Santísima Trinidad Residencia Sagrada Familia, Salamanca
- Training and support to achieve the final Senior-High-School level



## Experience

In 2016, started to be supported by Grupo Avanza-ADO and became the only official source for accessing, storing and managing the passenger service notices of its subsidiary Autobuses Salmantinos.

Since 2018 it is the only way to check the ETAs for each stop. This calculation is provided by an own algorithm which takes into account usual traffic, distance between stops, rush hours or special events, and it is offered through an in-app purchase.

Technologies and techniques used: Objective-C, Java, PHP, MySQL, JSON, Firebase, HTML5, CSS3, Javascript, elevator pitch, copywriting, digital networking & marketing, Google Adwords, Google Cloud Platform.



### **MemKey - The memes keyboard! (2018 - 2021)**

<https://bmsalamanca.com/memkey>

Mobile application as a custom keyboard for iOS and Android smartphones and tablets that allows users to search a meme through a third-party API and use it or share it on any app.

Technologies and techniques used: Objective-C, Java, REST API, JSON, HTML5, CSS3, Javascript, copywriting, social media, digital networking & marketing.



### **BurndownChartist (2019 - ...) <https://burndownchartist.appspot.com/>**

Open source web hosted on Google Cloud App Engine and connected to productivity app Todoist's API to produce a burndown chart for the specified project, date and options.

Technologies and techniques used: React, REST API, JSON, HTML5, CSS3, Google Cloud, digital networking & marketing.



### **CartasContraLaHumanidad.es (2019 - ...)**

<http://cartascontralahumanidad.es>

Adaptation from an open source multiplayer online card game, hosted on Heroku and which is the first alternative to play the popular board game Cards Against Humanity online in Spanish.

Technologies and techniques used: React, Websockets, Heroic, HTML5, CSS3.



### **CoViDCyL (2020 - ...) <https://mvarona.github.io/CoViDCyL>**

Tool to explore online all the data from the set 'Illness rate by basic health zone' over the CoViD-19 incidence on Castile and Leon. It includes a Siri Shortcut to ask her for the current and accumulated incidence at the desired zone. Open source project hosted on Github Pages.

Technologies and techniques used: PHP, API REST, JSON, HTML5, CSS3, Javascript, Github Pages.



### **Todayist (2020 - ...) <https://mvarona.github.io/todayist>**

A natural 12-hours-clock to visualize all today tasks from Todoist. Open source project hosted on Github Pages.

Technologies and techniques used: API REST, JSON, HTML5, CSS3, Javascript, Github Pages



## Honors and awards

- **TCUE Market-Driven Prototypes Contest 2022 Award**

- One of the six awarded in the Market-Driven Prototypes Contest of the University of Burgos, for the master thesis "Online recommendation system of Spanish municipalities based on user preferences and similarity across municipalities".

- **2<sup>nd</sup> Prize - 5<sup>th</sup> Edition of the Open Data Contest**

- Ideas category of the 5th Edition of the Open Data Contest by Castilla y León Regional Government, for the master thesis "Online recommendation system of Spanish municipalities based on user preferences and similarity across municipalities".

- **TCUE Market-Driven Prototypes Contest 2021 Award**

- First prize within the Science School and third within the University of Salamanca, including the campuses from Ávila, Béjar and Zamora, on the Market-Driven Prototypes Contest promoted by the University-Business Knowledge Transference Program for the bachelor thesis "Mobile-payment and customer-loyalty system on buses". The prize includes support and training to carry out a business plan following the lean startup methodology, and mentoring for the release of a complete and marketable final product.



# Experience

Chronological order:



## **EIPisoDeBilbao.com (2013 - 2014)**

Website built from scratch to promote a family residence on sale.

Technologies and techniques used: HTML5, CSS3, responsive web design, Javascript.



## **Alexia 3.0 (2014)**

Operational concept prototype for a possible future version of Alexia, the platform for the education sector by Cospa&Agilmic. After holding a meeting with its development team, the multinational company included some features from the prototype on the next Alexia version.

Technologies and techniques used: HTML5, CSS3, responsive web design, Javascript, elevator pitch, copywriting.



## **CamerataSalmantina.es (2016 - 2021) <http://cameratasalmantina.es>**

Responsive design web, which offers a great flexibility and speed to keep up to date dynamic content; as galleries or calendars with past and future events, and static content; as information pages or specific landing pages.

Technologies and techniques used: HTML5, CSS3, responsive web design, Javascript, PHP, JSON, digital editing.



## **AngelesCaidosELLibro.com (2017 - 2019)**

Backend platform to manage and send an ebook on demand. Frontend web based on WordPress.

Technologies and techniques used: PHP, HTML5, CSS3, WordPress.



## **Contribution to Open Source Project: Alf.io (2019) <https://alf.io/>**

Translation of almost the entire project from English to Spanish.

Technologies and techniques used: Heroku.



## **Contribution to Open Source Project: Sweet Alert iOS (2019) <https://github.com/mvarona/SweetAlert-iOS>**

Fork from the Sweet Alert iOS project in order to adapt it to Swift 5.

Technologies and techniques used: Swift.



## **FundHabit (2020 - ...) <https://mvarona.github.io/FundHabit>**

Tool to incentive and track the habits' achievement through fictional-money contributions to two funds. Open source project hosted on Github Pages.

Technologies and techniques used: HTML5, Cookies, CSS3, Javascript, Github Pages.



## **Iberdrolux (2020 - ...) <https://mvarona.github.io/iberdrolux>**

Calculator for ad hoc electricity plans, which makes use of previous own hourly consumption data obtained from Iberdrola Distribución Eléctrica (i-de.es). Open source project hosted on Github Pages.

Technologies and techniques used: Python, Github Pages.



## **MarioVarona (2020 - ...) <https://mariovarona.dev>**

Personal website developed from scratch with a modular approach in which the components are dynamically built based on a JSON file through a Python script. Open source project hosted by Github Pages.

Technologies and techniques used: Python, JSON, HTML5, CSS3, Javascript, Github Pages.