



# Ruben Roque Dias

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## Profile

I'm an Engineer (Master in Electrical Engineering) who genuinely loves programming and exploring new technologies. I learned iOS development on my free time, and it has quickly become a passion. I have a published app called ExpenseWiz for finance tracking, and have worked on some other projects.

## Qualifications / iOS Development

Apr 2020 **ExpenseWiz** released on the App Store

- Solo developer / owner for this app
- Used CloudKit for data backup and sync, CoreData for local storage, programmatic layouts, cocoapods for additional functionality (charts, monitoring network status)

On my website I have a few demos of the most interesting projects I've worked on. I began by learning from Udemy courses, and went on to taking several other courses from independent teachers and well known developers in the Swift community (LBTA, HWS). I have only studied Swift, however I've worked with a few interesting iOS and mobile-related technologies such as Firebase, RESTful services, OneSignal (push notifications), a variety of third-party libraries through cocoapods, even a brief dive into Ionic and PhoneGap. Nonetheless, below is a summary of what I believe to be my strong suits regarding iOS and app development.

iOS / Swift				General	
Swift UIKit + Animations	Auto Layout Programmatic Layouts	Core Data CloudKit	Cocoapods Firebase	Git / version control UI Design (Figma)	

## Work Experience

Jan 2019 - **Simulation Developer and Consultant** at INESC TEC, Portugal

- Jan 2020
- Developed simulations of virtual factory models (job-shop, production lines, etc) using Simio software
  - Performed data analysis using Excel
  - Trained new colleagues in using Simio / developing simulations, assisted master's students in their thesis

Apr 2018 - **Front-End Web Developer** at Dreamo, Portugal

- Dec 2018
- Developed workflow management interfaces with Javascript, jQuery, KendoUI, HTML and CSS (progress tables, kanban-style boards with drag & drop, among others)
  - Created back-end services (stored procedures) in SQL Server, consumed these services using C# and .Net
  - Developed mobile app prototypes for communication management using Ionic, PhoneGap and OneSignal

Mar 2017 - **Simulation Developer and Researcher** at INESC TEC, Portugal

- Mar 2017
- Developed simulations of virtual factory models (job-shop, production lines, etc) using Simio software
  - Used Simio's API (in C#) for connectivity with 3rd party technologies (REST api, Redis)
  - Performed data processing using Java (ETL), and data analysis using Excel

Sep 2015 - **Teaching Assistant** at the Faculty of Engineering of the University of Porto, Portugal

- Feb 2016
- Assisted in laboratory classes of the Digital Systems Laboratory course

## Education

Sep 2011 - **Integrated Master in Electrical and Computers Engineering**

Mar 2017 at the Faculty of Engineering of the University of Porto, Portugal

- Majored in Automation. Created automation applications for PLC/MES softwares, developed practical projects using microprocessors (e.g. Arduino), studied industrial/applied electronics, embedded systems, industrial informatics
- Specialised in Industrial Management, focusing on enterprise information systems (web development, process management), decision support systems (heuristics and algorithms) and operations management

**Master's Thesis: Models for Improvement Management and Operational Performance**

at INESC TEC, Portugal

Main goal: exploring Simulation as a tool for supporting decision making for manufacturing companies

- Created a virtual factory model (simulation) using AnyLogic (Java) to simulate a job-shop production line
- Provided real-time metrics of the simulator using InfluxDB for data storing and Grafana for data visualisation

Sep 2014 - **ERASMUS Exchange Program** at Wrocław University of Technology, Poland

- Mar 2015
- Went further on my specialisation, through classes on Artificial Intelligence, Business and Commerce, among others