



# Luís Pereira

## Curriculum Vitae

### Personal Information

Name **Luís Carlos Vieira Pereira**  
Address Travessa do Arco, 43, Bloco A, 1 Esq  
4410-456 – Arcozelo, Vila Nova de Gaia  
Date of Birth 24-04-1989  
Nationality Portuguese  
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### Education

**2007–2013 Master in Electrical and Computers Engineering.**  
Faculdade de Engenharia da Universidade do Porto  
Major in Automation  
Specialization in Robotics  
Final Classification: 14/20

### Master's Thesis

Title *Lithium Ion Battery Management System - Battery Model Oriented*  
Orientation Professor Adriano da Silva Carvalho  
Co-orientation Professor Armando Luís Sousa Araújo  
Description Study of a lithium battery model which better represents it's behaviour, as well as an implementation of the battery management system in an electric vehicle.  
Final Classification: 19/20

## Technical Education

### 2021 Getting Started with Golang.

Educator Academind by Maximilian Schwarzmller

Information Duration of 11 hours

<https://pro.academind.com/p/golang-the-practical-guide>

Content

- Language concepts, advantages and features
- All syntax elements and usage examples
- Some application examples

### 2021 Understanding TypeScript - 2021 Edition.

Educator Udemy / Academind by Maximilian Schwarzmller

Information Duration of 15 hours

<https://www.udemy.com/course/understanding-typescript/>

Content

- *Typescript* concepts, how it works and how to use it
- *Typescript* features like classes, interfaces, types, generics, decorators, modules and namespaces
- Using *typescript* with *React*, *Node.js* and *Express*

### 2021 NodeJS - The Complete Guide.

Educator Udemy / Academind by Maximilian Schwarzmller

Information Duration of 40.5 hours

<https://www.udemy.com/course/nodejs-the-complete-guide/>

Content

- *NodeJS* concepts, how it works and how to use it
- Web servers with vanilla *NodeJS* and with frameworks like *ExpressJS*
- Templating engines and *MVC* in *NodeJS* web servers
- Databases like *MySQL* and *MongoDB* and how they are used with *NodeJS*
- Sessions, cookies, user input validation and handling file upload and download
- Authentication and authorization
- Some external interfaces like payments with *Stripe*
- All previous topics combined to make an Online Shop as example
- Making an *API* with *REST* and *GraphQL* (with a message board example)
- *Web sockets* (added to the message board example to live update)
- Using and converting existing *NodeJS* applications to use *TypeScript*
- Introduction to *Deno*, with *CRUD* and databases

### 2021 React Native - The Practical Guide.

Educator Udemy / Academind by Maximilian Schwarzmller

Information Duration of 32.5 hours

<https://www.udemy.com/course/react-native-the-practical-guide/>

## Content

- *React Native*: what it is, how it works, using the vanilla CLI or Expo
- Native layout components and styling with responsive layouts (with TODO example application)
- Navigation and state management with *Context* and *Redux* (with a meals catalog example application)
- Handling user input
- Database, web server, authentication and *HTTP* requests (with an online shopping example application)
- Native device features, like camera, location and *SQLite* (with a catalog of favorite locations example application)
- Building and publishing application for Android and iOS using *Expo*
- *Push notifications* (applied to the online shopping example application for orders information)

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## Work Experience

**2017 - Design Engineer.**

**Present**

Employer NIBBLE Engenharia, LDA

Activities

- **Embedded systems design with ARM microcontrollers**
  - Specification and design of electronic circuits
  - CAD drawing of PCB for industrial production
  - PCB assembly and test
- **Firmware development for ARM microcontrollers**
  - C firmware development for peripherals interaction: network communication, UI for user interaction and file systems
- **Software development**
  - Windows software application development, with *C#*, for interaction with the embedded systems designed
- **Development of WEB platforms**
  - Development of new and update of existing internal WEB platforms that handles production, stock and business management, all written in *PHP*, templating with *smarty*, and some dynamic *frontend* content with *Vue*
  - Development of a new iot cloud solution, for integration with company products. Development of a backend and frontend for the solution, with CI/CD deployment
- **System administration**
  - Administration of internal systems, mainly email and WEB server, and systems of business management

**2014 - 2016 Electrical Engineer/Programmer.**

Employer ARCEN Engenharia, S.A

Activities

- **Automation developer for concrete and asphalt production plants**
  - STL language on Vipa/Siemens
  - Recipe management
  - Production log
- **Software developer for production and invoice management of concrete and asphalt production plants**
  - VB.NET Language
  - SQL Server
  - OPC Siemens
  - Features including: plant configuration and production log, orders and invoice.

**2013 - 2014 Electrical Engineer.**

Employer WEGEuro - Indústria Elétrica, S.A.

Activities

- Electrical panel design - Automation panels for electric motor drive
- In charge of the creation of a new department for production of electric panels in the existing production cycle of electric motors
- Production support
- Selection and order of needed production materials
- Electric test of the produced panels
- Technical support of the produced panels and motor drive equipments, like soft starters and variable frequency drivers

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## Personal Projects

Name **Mark Notes.**

- Description A personal note taking app using markdown
- Developed using *React* with *Typescript*
  - Has a local browser storage (offline) version at <https://mark-notes.netlify.app/> that allows for anyone to use as the notes are saved on the device
  - Allows to create any note with markdown style, and view it as normal text
  - Allows for import and export from any markdown file
  - Has search and favorited notes
  - Has self-hosted version with a *backend* server API written in *go* that has accounts, and enables multiple device access synchronization of notes

Name **Park Guide.**

- Description A digital guide for visitors of natural parks
- Made with *django* for the *backend*, and *React* for the *frontend*
  - The goal is to help natural parks provide useful and customized knowledge to visitors through the park
  - Allows for multiple language translations of the information providing less expenses on printed boards and maps
  - Allows for audio information and a bigger quantity of photographs of the subjects
  - Sequential navigation through defined zones for the natural path, but quick zone navigation through code or QR Code scanner
  - Was thought and developed as a personal idea focus on Gaia's Biological park (development prototype at <https://gaia-park.netlify.app/>)

Name **Balance Manager.**

- Description A personal finance management platform
- Made with *Laravel* for the *backend*, and *VueJS* for the *frontend*
  - Import expenses list directly from bank file
  - Import expenses from any data, selecting what represent each field
  - Group expenses into categories based on user defined criteria
  - Monthly budgets for each category
  - Instant view of input/output flow of money for current month (or any time interval defined)
  - Charts showing monthly expenses and annual evolution
  - Homepage showing current financial state compared to last month and the defined budgets

Name **My Personal Website.**

- Description My personal website that holds my curriculum, portfolio and a blog on what I'm doing
- Made with *Django* for the *backend*, and *ReactJS* for the *frontend* (only in the portfolio)
  - Blog posts can be written in *markdown* or *HTML*.

Name **Dinner with Friends.**

- Description Website created as a funny way for friends to schedule dinners in some restaurant and evaluate the service and food
- Made with *Laravel* for the *backend*, and *VueJS* for the *frontend*
  - Creation of new restaurant on the system, with location and contacts details
  - Add meals to each restaurant
  - Creation of events to taste meals with invitation of friends
  - User review for meals on the restaurant, that could be public or visible only by with friends

Name **Several online tools deployed.**

- Description A combination of tools deployed on servers for personal or business use
- Complete native installation: Nextcloud, Matrix Synapse Wallabag, RocketChat, Moodle, GitLab, Postfix and Dovecot (mail server).
  - Docker containers installation: Home Assistant, Gitea, Kanboard, Bookstack, MinIO.

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## Computer Skills

Programming Languages	C/C++, C#, SQL, NOSQL, HTML, JavaScript, Python, PHP, LISP, Clojure, Bash
Frameworks WEB	Django, Laravel, NodeJS, ExpressJS, VueJS, ReactJS, Code Igniter
Operating System	Linux and Windows

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## Technical Skills

Electronic circuits, Acquisition and signal processing, Acquisition and image processing (Industrial Vision), Industrial Communications, Drive and control of electric motors, Batteries, Renewable energies, Microcontroller programming, Decision support systems, PLC programming, Design of Industrial automation solutions  
Design of electrical schematics for electrical panels

## Social Skills

Easy adaptability to different workplaces and partners  
Good at Team Work  
Good in oral presentations  
Commitment and dedication  
Motivate to obtain knowledge  
Motivated by challenges and searching for solutions

## Languages

English **Good** *Very Good reading and writing comprehension. Good oral expression.*

## Hobbies

- Music
- Automation
- Programming
- Cinema
- New Technologies
- Do It Yourself (DIY)