

# Senior Full Stack Developer

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## ABOUT

Although I started my career in 2003 as a Researcher I've been always involved with information technologies and engineering, mainly in the development of computer controlled devices for scientific research and had participated in several scientific pubs\* and one patent\*\*. Gradually I've started to change my career focus with training courses on programming and later with a Master on Bioinformatics that gave all the knowledge to embrace more complex projects, namely in Data Mining, Big Data, Pattern Extraction, Machine Learning, Data Prediction, etc... In 2008, started to develop, from the scratch, a web based platform developed for research and laboratory management. It started with few features and now is the major tool in the organization at all levels. During this web platform development, several technologies were gradually adopted, according to the need, which gave me a great wide experience on implementation and integration of several technologies, including creating new interfaces (unavailable integrations). Following this project, I've also implemented similar platform (using the same base) on other research groups. Also, I've build, another platform (for an analysis laboratory) based on this platform but built using Laravel as the base framework.

Currently I'm working as Research Engineer at INL developing software under the scope of several internal projects. I've worked also in industry as Head of Web Development and senior full stack developer on the R&D department of a company whose main activity is the development from scratch of big format digital printers. I was hired to build a web platform that would allow the printers to communicate with it, but ended up building a large platform that manages most aspects of product development, from project management, through machine model definition, production control and expedition, machine communications, machine error logs and data statistics and analysis. This platform was entirely developed using Laravel framework (PHP/HTML5/JS/MySQL stack), Javascript (jQuery and Vue.js), with emphasis in API/Communications, big data handling and data analysis. Currently I'm preparing this platform to take data analysis deeper, mainly in terms of error analysis and implement some machine learning algorithms to allow the system to generate some predictive alerts and notifications , mainly for preventive maintenance. Apart from a big capacity to analyse problems, think, design and implement solutions for those problems, I consider my self as a very proactive person, always highly motivated with a big capacity to work in team and highly motivate to accept new challenges and always learn new things.

\* <https://orcid.org/0000-0002-1653-1725>

\*\* <https://patents.google.com/patent/US20100273253>

## SKILLS

### Programming Languages

PHP	9	Javascript	8	HTML	9	CSS	9	C/C++	3
Python	6	Perl	6	Android/Kotlin	7	Java	6	.Net	5
R	7								

### Frameworks

Laravel	10	Symfony	6	jQuery	9	jQuery UI	9	jQuery Mobile	9
VueJS	7	NodeJS	6						

### Databases

MySQL	10	PostgreSQL	8	SQLite	8	SQL Server	5	Oracle	5
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### Operative Systems

MS Windows	10	Mac OS	10	Linux	8
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### DevOps

Git	7	CI	7
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### Tools

Sublime Text	9	Visual Studio	8	Eclipse	7	Android Studio	7	Terminal / Bash	7
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## PORTFOLIO

### Laravel Scout Driver - OPEN-SOURCE

Jan 2020 - Feb 2020

#### Context

Simple Laravel Scout Driver based on MySQL table search

### Owncloud PHP Interface - OPEN-SOURCE

Jun 2015 - Sep 2015

#### Context

PHP Class to interface with owncloud API using cURL.

### End User platform and App – Conf. – Developer - WEB-DEVELOPEMNT

May 2020 - Sep 2020

#### Context

Project with emphasis in web development using PHP(Laravel), several Javascript Frameworks and MySQL DB as an end user platform interface and android app for the user to have access to the information of all their own equipment and/or control it. The main goal of this application and app was to provide the user with a communication interface with their equipment to receive all the sensing data and to be able to control it remotely using IoT principles and technologies like MQTT protocols

#### Main Activities

Analysis and architecture planning. Web Development (PHP (Laravel), CSS, Javascript, MySQL, ) and Android App Developemnt. Testing, production support and maintenance

#### Technologies

PHP; JavaScript; MySQL; HTML; CSS; Kotlin; MQTT;

**Internal Production Management System – Conf. – Developer - WEB-DEVELOPEMNT**

Nov 2018 - Feb 2020

**Context**

Project with emphasis in web development using PHP (Laravel), several Javascript Frameworks and MySQL DB for internal production line management. The main goal of this application is to follow the production process of each product, with several checkpoints, documentation and validation, outputting statistical data for tracking and production performance enhancement and machine data communication, collection and logging through encrypted

**Main Activities**

Analysis and architecture planning. Web Development (PHP (Laravel), CSS, Javascript, MySQL). Machine communications API. Testing and production support and maintenance

**Technologies**

PHP; JavaScript; VueJS; MySQL; HTML; CSS;

**Business tool – Conf. – Developer - WEB-DEVELOPEMNT**

Sep 2018 - Nov 2018

**Context**

Project with emphasis in web development using PHP(Laravel), several Javascript Frameworks and MySQL DB as a commercial business interface between company and clients to automatically register all clients activity and present a monthly cost/revenue. The main goal of this application is to communicate with the machines installed on each client, receive their jobs log and manage this information in terms of stocks supply, finances, etc...

**Main Activities**

Analysis and architecture planning. Web Development (PHP (Laravel), CSS, Javascript, MySQL). Testing and production support and maintenance

**Technologies**

PHP; JavaScript; MySQL; HTML; CSS;

**Internal Projects Management System – Conf. – Developer - WEB-DEVELOPEMNT**

Jan 2018 - Jul 2018

**Context**

Project with emphasis in web development using PHP, several Javascript Frameworks and MySQL DB for internal projects management tool with SCRUM board, GANTT, tasks and tickets system. The main goal of this application is to manage the request, creation and management of all internal projects according to the Quality Management System of the company.

**Main Activities**

Analysis and architecture planning. Web Development (PHP (Laravel), CSS, Javascript, MySQL). Testing, production support and maintenance

**Technologies**

PHP; JavaScript; MySQL; HTML; CSS;

**Analysis Laboratory Management System – Conf. – Developer - WEB-DEVELOPEMNT**

Jun 2017 - Jan 2018

**Context**

Project with emphasis in web development using PHP, several Javascript Frameworks and MySQL DB for analysis laboratory management area. The main goal of the application was to manage all the processes across all the activities related with laboratory management: Client Management; Budget Production; Services Management; Sample Registration; Sample Collection, Sample Reception; Sample Analysis; Result Registry; Results Treatment and formatting; Report Production; Equipment Management and Users management.

**Main Activities**

Analysis and architecture planning. Web Development (PHP (Laravel), CSS, Javascript, MySQL). Testing, production support and maintenance

**Technologies**

PHP; JavaScript; jQuery; MySQL; HTML; CSS;

**Management Platform System – CTAC-UM – Developer - WEB-DEVELOPEMNT**

Jun 2015 - Sep 2016

**Context**

Project with emphasis in web development using PHP, several Javascript Frameworks and MySQL DB for Research Projects Management area. The main goal of the application was to manage all the processes related with scientific projects management: Application, Execution Control and Finances control.

**Main Activities**

Analysis and architecture planning. Web Development (PHP,CSS,Javascript,MySQL) Testing, production support and maintenance

**Technologies**

PHP; JavaScript; jQuery; MySQL; HTML; CSS;

**Management Platform System – 3Bs-UM – Developer - WEB-DEVELOPEMNT**

Oct 2008 - Jan 2017

**Context**

Project with emphasis in web development using PHP, several Javascript Frameworks and MySQL DB for the research and management area. The main goal of the application was to manage all the processes across all the activities related with scientific research: Project management; Orders, Purchases and Stocks management; Equipment maintenance, booking and training management; Online Document creation, revision and management; Quality management system control (ISO 9001) and Users management.

### Main Activities

Analysis and architecture planning. Web Development (PHP,CSS,Javascript,MySQL) Testing, production support and maintenance

### Technologies

PHP; JavaScript; jQuery; MySQL; HTML; CSS;

### VNotes - APPS

Jan 2017 - Feb 2018

#### Context

VueJS handy notebook ready for desktop and mobile devices (webapp)<br>Interested? <b>Its free</b>. Ask me for an access.

## EXPERIENCE

Mar 2021 - Present	<p><b>Research Engineer</b> INL - International Iberian Nanotechnology Laboratory</p> <p>Software development under the scope of several internal projects</p>
Sep 2018 - Mar 2021	<p><b>Senior Full Stack Web Developer</b> MTEXNS</p> <ul style="list-style-type: none"> <li>• Internal platform to manage all aspect of companies activity</li> <li>• Projects management</li> <li>• Machine Realtime communications (both server-side and machine) using MQTT protocol</li> <li>• Data acquisition &amp; analisys</li> <li>• Big data handling</li> <li>• CI &amp; DevOps</li> </ul>
May 2018 - Sep 2018	<p><b>IT &amp; Project Manager</b> VATSystems</p> <ul style="list-style-type: none"> <li>• Team management</li> <li>• Project management</li> <li>• Development</li> <li>• CI</li> <li>• DevOps</li> </ul>
Sep 2008 - May 2018	<p><b>Developer as 3B's Research Group</b> 3B's Research Group - Univeristy of Minho</p> <p>Internal tools and software development</p>
Sep 2006 - May 2018	<p><b>IT Manager as 3B's Research Group</b> 3B's Research Group - Univeristy of Minho</p>
Sep 2003 - May 2010	<p><b>Researcher</b> 3B's Research Group - Univeristy of Minho</p> <ul style="list-style-type: none"> <li>• Animal tissue engineering projects</li> <li>• Conceptualization, design and development of tissue engineering support devices, namely bioreactors and other devices (patent)</li> <li>• Pubs: <a href="https://orcid.org/0000-0002-1653-1725">https://orcid.org/0000-0002-1653-1725</a></li> <li>• Patent: <a href="https://patents.google.com/patent/US20100273253">https://patents.google.com/patent/US20100273253</a></li> </ul>

## EDUCATION

Nov 2020 - Dec 2020 <b>Course</b>	<b>Treatment and Data Analysis with Python</b> University of Minho Treatment and Data Analysis with Python and Pandas, NumPy, Seaborn, Matplotlib and BeautifulSoup modules by TecMinho (University of Minho)
Oct 2018 <b>Course</b>	<b>Agile Software Development</b> University of Minho Agile Software Development: Scrum e Kanban training course by TecMinho (University of Minho)
Jan 2010 - MAr 2010 <b>Course</b>	<b>Curso de Formação Pedagógica Inicial de Formadores</b> CEFOLGEST – Formação e Consultoria Lda.
Sep 2009 - Dec 2010 <b>Master</b>	<b>Bioinformatics</b> University of Minho Master on Bioinformatics - Development of the final project of the Master on Bioinformatics (2nd year) entitled “Stem Cell Potential Application Prediction Based On Data Mining of Previous Experimental Data” by University of Minho
Sep 2008 - Jul 2009 <b>Post Graduation</b>	<b>Bioinformatics</b> University of Minho Completed the 1st year corresponding to the post-graduation on Bioinformatics. Learning Areas: Genetic Engineering, Optimization, Databases, Advanced Biological Algorithms, System Biology, Statistics and Data Mining by University of Minho
Jan 2007 <b>Course</b>	<b>PHP, MySQL and Apache Training Course</b> Centro De Estudos O Sábio De Lago
Oct 2006 <b>Course</b>	<b>Computational Algorithms Training Course</b> Centro De Estudos O Sábio De Lago
Jul 2002 - Jul 2003 <b>BSc</b>	<b>Trainee</b> 3B's Research Group - University of Minho Final Thesis/Project: “Isolation and differentiation of rat bone marrow cells into osteoblasts” by University of Minho.
Sep 1998 - Jul 2002 <b>BSc</b>	<b>Applied Biolgy</b> University of Minho Areas of Concentration: Cytology, Biochemistry, Animal Physiology, Applied Animal Biology, Microbiology, Vegetal Physiology, Applied Vegetal Biology, Ecology, Genetic, Molecular Biology, Genetic Engineering, Applied Virology, Immunology and Biomaterials by University of Minho.