






PERSONAL INFORMATION

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 Some websites:

Online Repos: <https://github.com/victorfern91> <https://www.npmjs.com/~victorfern91>

Linked-in Page: <https://www.linkedin.com/in/victorfern>

Sex Male | Date of Birth 11 December 1991 | Nationality Portuguese

JOB APPLIED FOR

Software Engineer | Electrical Engineer | Telecommunications Engineer

WORK EXPERIENCE

September 2014 - Present

Software Developer

MOG Solutions (<http://www.mog-technologies.com/>)

Rua Eng. Frederico Ulrich, 2650
4470-605 Moreira da Maia (Portugal)



MOG Technologies is a global specialist in software and hardware solutions for the media industry, namely broadcasting and post-production house, allowing the automation of ingest process and file conversions workflows, ensuring high interoperability between systems and formats.

The work I've developed requires an extensive use of **JavaScript**, **C++** and **Bash Scripts**. I'm also very familiar with **Agile** software development and the company uses **Scrum** methods on it's daily development and planning tasks.

At MOG, I'm working in software development at back-end level (product core) and front-end level.

At **Back-End Development Level**, I'm responsible for :

- Upgrading and creating new unit tests in **MXF::SDK (CPP Unit)**. Bug-fixing in encoding/transcoding chain of mxfsPEEDRAIL F1000.
- Creating quality control plugins for mxfsPEEDRAIL. These plugins use computer vision features to perform video analysis in real time. Some of them, are created to perform a semantic analysis and validate MXF files, according with SMPTE standards.
- Studying different approaches for writing and reading files in different devices used in broadcasting and media areas (like SONY PDW-U1/U2, etc). This study is important to be more efficient and get the fastest way to read and write files.

At **Front-End Development Level**, I'm responsible for :

- Refactoring and redesigning of mxfsPEEDRAIL GUI (HTML5). For this process was important implementing the JavaScript best practices techniques, preventing memory leaks, turn code more faster and modular, etc (using **CSS**, **Less**, **Handlebars.js**, **jQuery**, **Backbone.js**, **AngularJS**, **Require.js**, etc.).
- Creation of unit and functional tests (including Mock tests, using **Jasmine**, **Mocha**, **Chai**, **PhantomJS**, **CasperJS**, etc).
- Automation of Development tasks (**Grunt** and **Ant**).
- **Creating first Middleware Server for mxfsPEEDRAIL based in NodeJS.**
- Creating code documentation using **JSDoc**.

Sector: Media | Video Encoding | Software Development

EDUCATION AND TRAINING

November 2013 – July 2014

Intern at Enginner Department

MOG Solutions (<http://www.mog-technologies.com/>)

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4470-605 Moreira da Maia (Portugal)



The main goal of this internship was the creation of a new feature for the product mxSPEEDRAIL F1000. This feature is related with Quality Control during the ingest process, and for that was necessary to use Computer Vision and Machine Learning techniques (OpenCV). For this feature was important perform the video analysis in real time. This internship was associated with my Master's Thesis (Explicit Content Detection in Video Sequences).

Final Grade: 18 (out of 20)

During this internship, I developed skills in:

- **C++.**
- **Computer Vision and Machine Learning** (Using OpenCV framework)
- **Control Version Systems (Git and SVN)**

September 2012 – July 2014

Master's Degree in Electrical and Computer Engineering

Instituto Superior de Engenharia do Porto
Porto (Portugal)



- Area of study: **Telecommunications**

During this course, my studies has focused primarily on the acquisition of knowledge in electronics applied to telecommunications, design of networks based on fiber optics, digital signal processing, mobile communications systems and satellite communications, networking, management and network configuration, management of IP Mobile networks, Java programming applied to networks and services, digital television broadcasting and media services, etc.

Final Grade: 17 (out of 20)

September 2009 – July 2012

Bachelor's Degree in Electrical and Computer Engineering

Instituto Superior de Engenharia do Porto
Porto (Portugal)



During this course, my studies has focused primarily on the acquisition of knowledge in Electronics, Mathematics, Physics, Programming, Automation, Control and Telecommunications. This knowledge was mainly acquired in subjects like Theory of Electronic Circuits, Algorithms and Computer Programming, Development of Computer Applications, Computer Systems, Telecommunications, Digital Systems, Data Communications, Instrumentation Systems, Management, Signals and Systems, Aeronautics Communication Systems, etc.

Final Grade: 14 (out of 20)

2009 High School Graduation

Escola Secundária Fernão de Magalhães – Chaves
Final Grade: 15 (out of 20)

PERSONAL SKILLS

Mother tongue(s) Portuguese

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1
Spanish	C1	C1	B1	B1	B1

Social skills and competences

I was volunteer at “*Banco Alimentar contra a Fome*” in actions of food collection. *Banco Alimentar contra a Fome* is one of the most important institutions in Portugal. This institution distributes food for deprived and homeless families.

I was Student member of IEEE organization, associated with Instituto Superior de Engenharia do Porto student branch (ISEPinIEEE). In this Student Branch, I was responsible for the server and network maintenance. Also, I founded ISEPaProgramar which is an educational programming project.

Other skills

I practiced karate for 9 years and I was federated during the last years of practice.

I have interest in increasing my knowledge in creation of **web applications** (JavaScript, Node.js, AngularJS, etc...), **programming mobile devices** (like Android and iOS) and **programming product core/back-end services** (focused in the best performance and saving computer resources).

Interest in Photography.

Computer skills

Knowledge in **MS Office (Word, Excel, PowerPoint, Publisher e Access), Matlab, Pspice, Multisim, Eagle and LaTeX.**

Advanced user in **Linux, Mac OS X e Windows.**

Expertise in various programming languages:

- **C**
- **C++**
- **Java**
- **JavaScript**
- **Bash**
- **Python**
- **C#** (Basic Knowledge)
- **PHP** (Basic Knowledge)

Advanced knowledge in web programming languages (**JavaScript, CSS, HTML5, JSP** and **JavaBeans**).

Management and creation of relational databases (**SQL**) and non-relational databases (**Google DataStore** and **MongoDB**).

Network equipment configuration based on Linux (Switches, Routers, etc.)

Projects

- **ISEPaProgramar** - I founded this academic project. The main objective of this project was helping engineering students with difficulties with programming languages. (<http://www.ieee-pt.org/2014/04/02/isepaprogramar-first-edition-c-by-ieee-student-branch-isep/>).

During my academic journey, I developed interesting projects for some subjects:

- **Instalation and configuration of an Enterprise computer network**, for this project i have used many networking functionalities associated with Linux operational system. To build this network was used technologies like: **VPN, Firewall, VoIP, DNS, DHCP, PPTP, SSH, FTP, VoD, RADIUS, Nagios**, etc.
- Development of Battleship Game, using **Java** language and client-server architecture under the **TCP/IP** model.
- Developed an Online Auctions Web Application, using **JavaBeans, JavaServer Pages (JSP), Java Servlet** and a **relational database (MySQL)**. In this project I increased my knowledge in configuration and deployment of Web servers (like **Apache Tomcat**) and relational database, **HTML, JavaScript** and **CSS**. During the project acquire new knowledge in the following areas: **Google Maps API, Facebook Open Graph API** and **TLS**.
- Development of a Platform for Construction and Provision of Online Surveys, this platform was created using **Google App Engine**, technologies as **JSP** and **Java Servlets**. To create the database in this project was used **Google Datastore technology (non-relational database)**.
- Creation of a Solar Panel Positioning System. This project was based on a PIC microcontroller system. This project used USB communication capabilities to send data

from the microcontroller to the computer.

- Creation of an analog thermostat. This project increased my knowledge in analog electronics and instrumentation systems. It was necessary use a temperature sensor and perform the signal conditioning. Also, was used an Arduino board to read sensor value and send data to a local web server.

Driving licence

- B, B1

ADDITIONAL INFORMATION

Conferences

- May 3, 2014 – **Python Workshop** – ISEP in IEEE
Instituto Superior de Engenharia do Porto
- October 10, 2013 – **Lecture “Desenvolvimento em Android”** (in English, Android Development) – ISEP-ACM Student Chapter
Instituto Superior de Engenharia do Porto
- October 3, 2013 – **Lecture “Desenvolvimento em iOS”** (in English, iOS Development) – ISEP-ACM Student Chapter
Instituto Superior de Engenharia do Porto
- April 10, 2013 – **Lecture “Indoor location awareness: technologies and applications”** – 6th ISEP International Week
Instituto Superior de Engenharia do Porto
- March 18, 2013 – **Conference “Carreiras de Sucesso”** (in English, “Successful Careers”) –
Faculdade de Engenharia da Universidade do Porto
- May 2, 2012 – **Talk “O Futuro da UE”** (in English, “The Future of the EU”) –
Faculdade de Engenharia da Universidade do Porto
- March 28, 2011 – **Lecture “Robotics and Navigation for Medical Applications”** – 4th ISEP International Week
Instituto Superior de Engenharia do Porto

Presentations

- September 5, 2014 – Presentation of the article which I submitted to **INFORUM 2014** conference. The title of this article was “Detecção de Conteúdo Explícito em Sequências de Vídeo” (in English, Explicit Content Detection in Video Sequences).
Reitoria da Universidade do Porto