



David Campos

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PROFILE

With experience in multiple fields, including software development, research and team leading, I am a versatile and enthusiastic individual that wants to learn and take on new challenges.

My passion is to design powerful and scalable software solutions, ranging all ends of the development spectrum, including the design and implementation of innovative web applications, services, frameworks and APIs. I am always pushing myself to learn new concepts and techniques, namely in web development, machine learning, information extraction, medical imaging and team leading approaches.

EXPERIENCE

Team Leader for Partnering Diagnostics and Data Analysis Jun. 2017 - Present

Bosch Thermotechnology, Aveiro, Portugal

- Lead a **team of 5 developers** to build innovative solutions for **smart diagnostics and predictive maintenance** of HVAC appliances using advanced **operational data mining** approaches.

Chief Technology Officer (CTO) Feb. 2014 - May 2017

BMD Software Lda., Aveiro, Portugal

- Lead a **team of 4 developers** with **in-depth contributions** in software **architecture, development, testing, deployment, maintenance** and **customer support** of two **high-demanding web-based products**:
 - Web-based medical imaging platform for patient images storage, visualization, printing and sharing, enabling simple and efficient workflows in hospitals, clinics and laboratories;
 - Biomedical text mining web services targeting automatic extraction of information (entities and their relations) from scientific texts for pharmaceuticals and research centers.

Ph.D. Researcher 2008 - 2014

IEETA, University of Aveiro, Aveiro, Portugal

- Developed 6 web-based applications for biomedical information extraction, namely automatic named entity recognition and assisted documents curation;
- Delivered and contributed to more than 20 publications in reference international journals and conferences;
- Contributed to 4 European and Portuguese research projects, and directed the master thesis work of 4 students;

Intern Sep. 2012 - Dec. 2012

Erasmus Medical Center, Rotterdam, Netherlands

Developed a machine learning-based solution for the automatic recognition of gene-drug relations from scientific articles.

Teacher 2011 - 2012

University of Aveiro, Portugal

- **Java Programming I and Programming II**

Intern Sep. 2010 - Dec. 2010

European Bioinformatics Institute, Cambridge, United Kingdom

Contributed to the CALBC project by designing and implementing a machine learning-based solution to combine heterogeneous gene and protein annotations from four different systems.

EDUCATION

Doctor of Philosophy (Ph.D.) 2009 - 2014

Universities of Minho, Aveiro and Porto, Portugal

- **Title:** Mining biomedical information from scientific literature.

Master of Science (M.Sc.) 2003 - 2008

University of Aveiro, Portugal

- **Title:** Distribution of the teaching service: back and front office Web

SELECTED PUBLICATIONS

- **David Campos**, Jóni Lourenço, Sérgio Matos, José Luís Oliveira. Egas: a collaborative and interactive document curation platform. Database, vol. 2014, no. 10.1093, p. 1-12, June 2014 (**IF 2014: 3.372**)
- **David Campos**, Sérgio Matos, José Luís Oliveira. A modular framework for biomedical concept recognition. BMC Bioinformatics, vol. 14, no. 281, September 2013 (**IF 2012: 3.024**)

SELECTED TOOLS

Neji

- **Goal:** Framework for heterogeneous biomedical concept recognition and to support event and relation mining development.

🌐 <https://github.com/BMDSoftware/neji>

Egas

- **Goal:** Web-based platform for biomedical text mining and collaborative automatic and manual extraction of entities and their relations.

🌐 <https://demo.bmd-software.com/egas>

MAIN SKILLS

Programming

- **Languages:** Java, C#, C, C++, Scala, PHP.
- **Web:** HTML, CSS, JavaScript.
- **Services:** SOAP and REST (with security).
- **Servers:** Nginx, Apache, Jetty, Netty, Tomcat, IIS.
- **Databases:** MySQL, SQL Server, Memcached, Redis.
- **Frameworks:** Play Framework, Node.js, GWT, .Net.
- **Workflow management:** Maven, SBT, NPM, Grunt.
- **CI/CD:** Jenkins Pipelines.
- **Performance optimization and debugging.**
- **Source code management:** Git and SVN.
- **OSes:** Mac OS, Linux and Windows.

Team leading

- Task assignment and risk management through Agile Kanban and Scrum.

Software engineering

- Requirements analysis, system modeling, project planning and management

Concepts

- **Machine learning:** CRFs, SVMs, MEMMs, NBs, NNs.
- **Text mining:** information extraction and retrieval.
- **Medical imaging:** DICOM and image processing.
- **Biomedical:** domain knowledge and resources.

Languages

- **Portuguese** (native), **English** (proficient) and **Spanish** (independent).

Miscellaneous

- **Driver's license:** Category B (Portugal).