



# 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).