

Tiago Boldt Sousa | [tiagoboldt.net](http://tiagoboldt.net)  
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Tiago holds a Ph. D. in Software Engineering from the Faculty of Engineering from the University of Porto, specializing in cloud computing architectures, where he also teaches since 2012. In the industry, Tiago has mostly been building products for digital marketing since 2011. He was the first engineer at ShiftForward, soon moving to a product leadership role. He helped grow the company towards its acquisition by Velocidi in 2018, where he kept the same role. As product lead, Tiago owns the roadmap, defining and prioritizing new features, drafting them with the design team, supporting the engineers planning and methodology, and cooperating with the marketing team on product communication. His previous experiences took him through several R&D positions in academia and independent consulting in Software Engineering.

### Current positions

*Product Lead*, Velocidi

*Invited Assistant Professor*, Faculdade de Engenharia da Universidade do Porto

## Education

- 2020 *Doctor in Informatics Engineering.*  
Thesis: Engineering Software for the Cloud - A Pattern Language. Supervised by Dr. Hugo Sereno Ferreira and co-supervised by Dr. Filipe Correia. Faculdade de Engenharia da Universidade do Porto.
- 2011 *Master in Informatics and Computing Engineering.*  
Thesis: HTML5 for cross-platform development of Social Web applications. Supervised by Dr. Eduarda Mendes Rodrigues. Faculdade de Engenharia da Universidade do Porto.

## Work Experience

- 2018 – *Product Lead at Velocidi.*  
Define and prioritizing new features, collaborating with the design team, supporting the engineers planning and methodology, and cooperating with the marketing team on product communication
- 2014 – 2018 *Product Lead at ShiftForward, S.A.*  
Define and manage the development of a highly scalable digital marketing campaign optimization software.
- 2011 – 2014 *Researcher at INESC TEC*  
AAL4ALL: Software architecture for an health infrastructure responsible for acquiring and propagating medical data from multiple consumers and producers, with an expected volume of data of over one million messages per day.  
eCAALYX and CAALYX-MV (EU projects): Capture data from biometric sensors using mobile phones and forward it through a gateway responsible for filtering and processing the data.
- 2011 *Software Engineer at ShiftForward, Lda*  
Design and implement an highly scalable container tag system for digital marketing purposes.
- 2010 – 2011 *Junior Researcher at Fraunhofer Portugal*  
Research of novel web technologies and their uses to build cross-platform applications. Design and implementation of an ONLINE SOCIAL NETWORK FOR OLDER

## ADULTS.

- 2010 *Consultant for Tecla Colorida - Software Educativo Lda*  
Design and implement a system for ICF classification in public schools.
- 2010 *Software engineering consultant at Faculdade de Engenharia da Universidade do Porto*  
Design a system for work-groups management and evaluation in classes.
- 2010 *Software Engineer at Centro Informático Professor Correia Araújo*  
Design and implement an access control system to be used at Faculdade de Engenharia da Universidade do Porto, integrated with the existing Information System for the faculty.
- 2009 *Software Engineer at SAPO/Associação Ensino Livre/Portugal Telecom*  
Development of AnimAll, a Python slide show generator using GStreamer.

## Academic Activity

### ASSISTANT LECTURER

Assistant Lecturer for the following courses of the Integrated Master's in Informatics and Computation Engineering from the Faculdade de Engenharia da Universidade do Porto:

- 2019/20 Software Development Laboratory, 4<sup>th</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.  
Software Systems Architectures, 4<sup>th</sup> year.
- 2018/19 Software Development Laboratory, 4<sup>th</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.
- 2017/18 Software Development Laboratory, 4<sup>th</sup> year.  
Software Engineering, 3<sup>rd</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.
- 2016/17 Computers Laboratory, 2<sup>nd</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.

- 2015/16 Computers Laboratory, 2<sup>nd</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.
- 2014/15 Algorithm Conception and Analysis, 3<sup>rd</sup> year.  
Software Development Laboratory, 4<sup>th</sup> year.
- 2013/14 Databases and Web Applications Laboratory, 3<sup>rd</sup> year.  
Software Development Laboratory, 4<sup>th</sup> year.
- 2012/13 Computer Laboratory, 2<sup>nd</sup> year.  
Databases and Web Application Laboratory, 3<sup>rd</sup> year.  
Software Development Laboratory, 4<sup>th</sup> year.

## SUPERVISIONS

### Master Thesis

- 2016 Ruben Barros. *DevOps Technologies for Tomorrow*. ISEP.
- 2016 Carlos Teixeira. *Towards DevOps: Practices and Patterns from the Portuguese Startup Scene*. FEUP.
- 2015 Filipe Oliveira. *Exploring the Scala Macro System for Compile Time Model-Based Generation of Statically Type-Safe REST Services*. FEUP.
- 2014 Luís Fonseca. *Exploring Rapid Application Development for Android with Scala and SBT*. FEUP.
- 2014 Omar Castro. *Shellhive: Towards a Collaborative Visual Programming Language for UNIX Workflows*. FEUP.
- 2013 João Alves, *Towards a Self-Managed Framework for Orchestration and Integration of Devices in AAL*. FEUP.
- 2013 Vasco Grilo. *Exploring the flexibility of Scala Implicits towards an Extensible Live Environment*. FEUP.
- 2012 Tiago Almeida. *End-User Programming In Mobile Devices through Reusable Visual Components Composition*. FEUP.

### Bachelor's projects

- 2012 Diogo Silva, Vitor Moreira. *Aplicação Android para Monitorização de Idosos*. ISEP.

## INTERNSHIPS

- 2018 Pedro Costa. Automation for Sales Operations. Summer internship. Amazon Web Services Spain and FEUP.
- 2018 Miriam Gonçalves. Adforecaster User Interface. Summer internship. Velocidi and FEUP.

- 2017 Pedro Costa. Human Resources Management Platform. Summer internship. Bit-Maker and FEUP.
- 2017 Maria João Mira Paulo. Mobile Marketing App. Summer internship. SportZone and FEUP.

#### OTHERS

- 2014 – 2019 *My First 3D Movie*. Proponent of the Summer course for students with age comprehended between 15 and 17. Universidade Júnior, Universidade do Porto, Porto.
- 2012, Oct *Automated Tests in Python*, 1 day workshop session. Ubiwhere.
- 2008, 2009 *A Computer's Anatomy*. Summer course for students with age comprehended between 15 and 17. Universidade Júnior, Universidade do Porto, Porto.

#### Grants, Honors & Awards

- 2012 Best Participation, Portuguese Software Engineering Doctoral Symposium.
- 2006 Best Student, Escola Secundária de Gondomar.

#### Publications & Talks

- 2019 João Pedro Dias, Ferreira, Hugo Sereno Ferreira, Tiago Boldt Sousa. *Testing and Deployment Patterns for the Internet-of-Things*. 24th European Conference on Pattern Languages of Programs (EuroPLOP '19).
- 2019 Hugo Sereno Ferreira, André Restivo, Tiago Boldt Sousa. *Towards a Pattern Language for the Masters Student*. 24th European Conference on Pattern Languages of Programs (EuroPLOP '19).
- 2018 Tiago Boldt Sousa, Hugo Sereno Ferreira, Filipe Correia. *Overview of a Pattern Language for Engineering Software for the Cloud*. Proceedings of the 2018 Conference on Pattern Languages of Programs (PLOP '18).
- 2018 Tiago Boldt Sousa, Hugo Sereno Ferreira, Filipe Figueiredo Correia, Ademar Aguiar. *Engineering Software for the Cloud: Automated Recovery and Scheduler*. 23rd European Conference on Pattern Languages of Programs Proceedings (EuroPLOP '18).
- 2018 Tiago Boldt Sousa, Hugo Sereno Ferreira, Filipe Figueiredo Correia, Ademar Aguiar. *Engineering Software for the Cloud: External Monitoring and Failure Injection*. 23rd European Conference on Pattern Languages of Programs Proceedings (EuroPLOP '18).

- 2017 Tiago Boldt Sousa, Hugo Sereno Ferreira, Filipe Figueiredo Correia, Ademar Aguiar. *Engineering Software for the Cloud: Messaging Systems and Logging*. Proceedings of the 22nd European Conference on Pattern Languages of Programs (EuroPLoP '17).
- 2016 Tiago Boldt Sousa, Ademar Aguiar, Hugo Sereno Ferreira, Filipe Figueiredo Correia. *Engineering software for the cloud: patterns and sequences*. Proceedings of the 11th Latin-American Conference on Pattern Languages of Programming (SugarLoaf PLoP '16).
- 2015 Tiago Boldt Sousa, Filipe Correia, Hugo Sereno Ferreira. *Patterns for Software Orchestration on the Cloud*. Proceedings of the 22nd Conference on Pattern Languages of Programs (PLoP '15).
- 2014 Omar Castro, Tiago Boldt Sousa, Hugo Sereno Ferreira. *Collaborative Web Platform for UNIX-based Big Data Processing*. International Conference on Cooperative Design, Visualization and Engineering (CDVE '14).
- 2014 João Pascoal Faria, Bruno Lima, Tiago Boldt Sousa, Angelo Martins. *A testing and certification methodology for an open ambient-assisted living ecosystem* International Journal of E-Health and Medical Communications.
- 2013 Tiago Boldt Sousa. *Sensors, actuators and services: a distributed approach*. Proceedings of the 2013 companion publication for conference on Systems, programming, & applications: software for humanity (SPLASH '13).
- 2013 Tiago Boldt Sousa and Angelo Martins. *Monitor, Control and Process – An Adaptive Platform for Ubiquitous Computing*. International Conference on Cooperative Design, Visualization and Engineering (CDVE '13).
- 2013 Joao Pascoal Faria, Bruno Lima, Tiago Boldt Sousa and Angelo Martins. *A Testing and Certification Methodology for an Ambient-Assisted Living Ecosystem*. IEEE 15th International Conference on e-Health Networking, Applications & Services (Healthcom).
- 2012 Tiago Boldt Sousa and Hugo Sereno Ferreira. *Object-Functional Patterns: Rethinking Development in a Post-Functional World*. Eighth International Conference on the Quality of Information and Communications Technology (QUATIC '12).
- 2012 Hugo Sereno Ferreira, Tiago Boldt Sousa and Angelo Martins. *Scalable Integration of Multiple Health Sensor Data for Observing Medical Patterns*. International Conference on Cooperative Design, Visualization and Engineering (CDVE '12).

- 2012 Tiago Almeida, Hugo Sereno Ferreira and Tiago Boldt Sousa. *A Collaborative Expandable Framework for End-users and Programmers*. International Conference on Cooperative Design, Visualization and Engineering (CDVE '12).
- 2012 Tiago Boldt Sousa. *Dataflow Programming: Concept, Languages and Applications*. Doctoral Symposium on Informatics Engineering (DSIE '12).
- 2012 Sandra Prescher, Alan K. Bourke, Friedrich Koehler, Angelo Martins, Hugo Sereno Ferreira, Tiago Boldt Sousa, Rui Nuno Castro, António Santos, Marc Torrent, Sergi Gomis, Margarita Hospedales and John Nelson. *A Ubiquitous Ambient Assisted Living Solution to Promote Safer Independent Living in Older Adults Suffering from Co-morbidity*. 34th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'12).
- 2011 Tiago Boldt Sousa. *Storytelling for older adults in online social networks with novel web technologies*. Master's thesis.
- 2011 Tiago Boldt Sousa, Pedro Tenreiro, Paula Alexandra Silva and Eduarda Mendes Rodrigues. *Storytelling meets the Social Web: an HTML5 cross-platform application for older adults*. 13th International Conference on Human-Computer Interaction (Interact '11).
- 2011 Tiago Boldt Sousa, Pedro Tenreiro, Paula Alexandra Silva and Eduarda Mendes Rodrigues. *Cross-Platform Social Web Application for Older Adults with HTML 5*. International Conference on Entertainment Computing (ICEC '11).
- INVITED TALKS
- 2011 *Software Livre - Conceito e Aplicações*. Semana TIC, Escola Secundária de Gondomar.
- 2013 *Hands-On Introduction to Agile Methodologies*. NuIEEE Hack Day, FEUP.

#### BOOK REVIEWS

- 2020 *Naming Things*. Tom Benner. In development. *Microservices in Action*. Morgan Bruce and Paulo Pereira.

#### OTHER PUBLICATIONS

- 2010 Tiago Boldt Sousa. *Gnome: Tips and Tricks, Awesome Desktops, How to Make Backup Copies from Your Files and Reading Windows Files*. Linux Identity Magazine.

## Conference Organization

- 2020 Program Chair. *European Pattern Language of Programs conference (EuroPloP), Germany.*
- 2019 Conference Chair. *European Pattern Language of Programs conference (EuroPloP) 2018, Germany.*
- 2017 Student Volunteer. *European Pattern Language of Programs conference (EuroPloP) 2017, Germany.*
- 2016 Student Volunteer. *SugarLoaf PloP. Buenos Aires, Argentina.*
- 2015 Student Volunteer. *Pattern Language of Programs (PloP). Pittsburgh, United States.*
- 2014 Co-Chair. *Jornadas dos 20 anos da Engenharia Informática e Computação, Porto, Portugal.*
- 2012 Local Chair. *8th International Conference on the Quality of Information and Communications Technology, Portugal.*
- 2012 Co-Chair. *Agile Portugal.*
- 2012 Organization Committee Co-Chair. *Doctoral Symposium in Informatics Engineering. Porto, Portugal.*
- 2011 Co-Chair. *Agile Portugal. Porto, Portugal.*
- 2010 Student Volunteer. *Agile Portugal. Porto, Portugal.*

## AFFILIATIONS

- 2008 – 2010 President. *IEEE Porto Student Branch.*