



João Pedro Dias

ENGINEER. DEVELOPER. RESEARCHER. AMATEUR PHOTOGRAPHER.

Porto, Portugal

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Summary

Current Researcher at INESC TEC and pursuing a PhD degree in Informatics Engineering. Graduated from the Integrated Masters in Informatics and Computing Engineering, I'm passionate about technology, with a special focus on security and privacy, web development, data mining & Internet of Things. Besides that, I'm also an amateur photographer, football player, book lover and science addict.

ORCID: [0000-0001-9066-6436](https://orcid.org/0000-0001-9066-6436)

Education

Doctoral Program in Informatics Engineering – ProDEI (PhD)

Porto, Portugal

FACULTY OF ENGINEERING, UNIVERSITY OF PORTO (FEUP)

2016–Exp. 2020

- Work under Supervision of Hugo Sereno Ferreira, PhD and Co-Supervision of João Pascoal Faria, PhD

Master in Informatics and Computing Engineering – MIEIC (MSc)

Porto, Portugal

FACULTY OF ENGINEERING, UNIVERSITY OF PORTO (FEUP)

2011–2016

- GPA: 15 out of 20
- Volunteer at *Semana Profissão: Engenheiro (SPE) 2014 & 2016*

Sciences and Technologies

Amarante, Porto, Portugal

EXTERNATO DE VILA MEÃ

2008–2011

- GPA: 17 out of 20

Work Experience

INESC TEC – Institute for Systems and Computer Engineering, Technology and Science | CSIG – Centre for Information Systems and Computer Graphics

Campus FEUP, Porto, Portugal

RESEARCHER

May 2017 – Today

- Researching in the area of Internet of Things, with special focus on Blockchain and Healthcare applications, in the scope of the project NanoSTIMA: *Macro-to-Nano Human Sensing: Towards Integrated Multimodal Health Monitoring and Analytics*.

LIACC – Artificial Intelligence and Computer Science Laboratory

University of Porto, Porto, Portugal

RESEARCHER

Sept. 2016 – Apr. 2017

- Researching data representation and data mining applications on railway transportation systems in the scope of the project PEDDIR: *Weigh in Motion and Wheels Defect Detection*.
- Technologies: **MongoDB**, **Python** and **Web Development** | Project details: www.peddir.eu & www.in2rail.eu

ShiftForward, S.A.

Porto, Portugal

SUMMER ENGINEERING INTERN

Jul. 2015 – Aug. 2015

- Development of a Deploy Logger Service, a service for documenting and recording the release of new product versions over time.
- Technologies: **Scala** and **Backbone.js** | Project details: [shiftforward.github.io/malamute/](https://github.io/malamute/)

Centro Hospitalar do Tâmega e Sousa, E.P.E.

Penafiel, Porto, Portugal

IT DEPARTMENT INTERNSHIP

Jul. 2014 – Aug. 2014

- Development of an expedient management system for replacing the existent system based on paper archives.
- Technologies: **MySQL** and **PHP**

Teaching

INTEGRATED MASTER IN INFORMATICS AND COMPUTING ENGINEERING · FEUP · 5 YEARS

2018 - 2019 *Invited Assistant Professor*, **Software Development Laboratory** · 4th year (First Semester)

– 3 hours per week

2018 - 2019 *Invited Assistant Professor*, **Operating Systems** · 2nd year (Second Semester)

– 4 hours per week

2017 - 2018 *Invited Assistant Professor*, **Operating Systems** · 2nd year (Second Semester)

– 4 hours per week · 45 students

Additional Training

2018	1st UPTEC School on the Future of Computing , UPTEC – Science and Technology Park of University of Porto	<i>FBAUP, Porto, Portugal</i>
2017	CyberTalk: Security - Business Enablement , Multicert – Electronic Certification Services, S.A.	<i>FEUP, Porto, Portugal</i>
2017	Project Management , ERASMUS+ Mobility for teaching	<i>FEUP, Porto, Portugal</i>
2016	AWS Technical Essentials Online , Amazon Web Services – Training and Certification	<i>Online</i>
2015	Practical Workshop in Agile Project Management , Strongstep - Innovation in Software Quality	<i>UPTEC, Porto, Portugal</i>
2015	CERN Spring Campus , CERN - European Organization for Nuclear Research	<i>Lisbon, Portugal</i>
2014	M101JS: MongoDB for Node.js Developers , MongoDB University	<i>Online</i>

Skills & Languages

Programming	Python • Node.JS • C/C++ • Scala • Java • C# • PHP
Web Technologies	HTML5 • CSS • JavaScript • Laravel(PHP) • Flask(Python) • Bootstrap(CSS) • jQuery(JS)
Databases	MySQL • PostgreSQL • InfluxDB • MongoDB
Others	Arduino • Git • Android • Windows Apps • Docker • LaTeX
Languages	Portuguese (Mother-tongue) • English

Publications

CONFERENCE ARTICLES (PEER-REVIEWED)

2018	A BRIEF OVERVIEW OF EXISTING TOOLS FOR TESTING THE INTERNET-OF-THINGS , João Pedro Dias, Flávio Couto, Ana C.R. Paiva, Hugo Sereno Ferreira First International Workshop on Verification and Validation of Internet of Things (VVIoT 2018) { DOI: 10.1109/ICSTW.2018.00035 }	<i>Västerås, Sweden</i>
2017	PATTERNS FOR THINGS THAT FAIL , António Ramadas, Gil Domingues, João Pedro Dias, Ademar Aguiar, Hugo Sereno Ferreira 24 th Conference on Pattern Languages of Programs (PLoP 2017) { DOI: To Appear }	<i>Vancouver, Canada</i>
2017	TOWARDS A FRAMEWORK FOR AGENT-BASED SIMULATION OF USER BEHAVIOUR IN E-COMMERCE CONTEXT , Duarte Duarte, João Pedro Dias, Hugo Sereno Ferreira and Zaf. Kokkinogenis 15 th International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS'17) { DOI: 10.1007/978-3-319-61578-3_3 }	<i>Porto, Portugal</i>
2017	AUTOMATING THE EXTRACTION OF STATIC CONTENT AND DYNAMIC BEHAVIOUR FROM E-COMMERCE WEBSITES , João Pedro Dias and Hugo Sereno Ferreira 8 th International Conference on Ambient Systems, Networks and Technologies (ANT'17) { DOI: 10.1016/j.procs.2017.05.355 }	<i>Madeira, Portugal</i>
2017	A HANDS-ON APPROACH ON BOTNETS FOR BEHAVIOR EXPLORATION , João Pedro Dias, José Pedro Pinto and José Magalhães Cruz 2 nd International Conference on Internet of Things, Big Data and Security (IoTbDS 2017) { DOI: 10.5220/0006392404630469 }	<i>Porto, Portugal</i>

OTHERS

2018	A PRELIMINARY STUDY ON MESH NETWORKS AND IoT , Filipa Barros, Luis Sousa, João Pedro Dias and Hugo Sereno Ferreira 11 th Meeting of Young Researchers of University of Porto (IJUP 2018)	<i>Porto, Portugal</i>
2017	AUTOMATING THE EXTRACTION OF STATIC CONTENT AND DYNAMIC BEHAVIOUR FROM E-COMMERCE WEBSITES , João Pedro Dias and Hugo Sereno Ferreira 10 th Meeting of Young Researchers of University of Porto (IJUP 2017)	<i>Porto, Portugal</i>
2016	A HANDS-ON APPROACH ON BOTNETS FOR A LEARNING PURPOSE , João Pedro Dias, José Pedro Pinto and José Magalhães Cruz 9 th Meeting of Young Researchers of University of Porto (IJUP 2016)	<i>Porto, Portugal</i>

DISSERTATIONS

- 2016 **REVERSE ENGINEERING STATIC CONTENT AND DYNAMIC BEHAVIOUR OF E-COMMERCE SITES FOR FUN AND PROFIT**, Supervised by Hugo Sereno Ferreira | Grade of 17 out of 20. *Porto, Portugal*
Master's Dissertation, Faculty of Engineering, University of Porto { ID: 10216/85374 }

Educational & Scientific Activities

MASTER'S DISSERTATION CO-SUPERVISING

- 2017 **DYNAMIC ALLOCATION OF SERVERLESS FUNCTIONS IN IOT ENVIRONMENTS** by Duarte *Porto, Portugal*
– **Pinto**, Supervised by Hugo Sereno Ferreira, PhD, Masters in Informatics and
2018 Computing Engineering, Faculty of Engineering, University of Porto
- 2017 **EXPLORING BLOCKCHAIN AS AN AUTHENTICATION AND SECURITY MECHANISM FOR IOT** by *Porto, Portugal*
– **Guilherme Pinto**, Supervised by Hugo Sereno Ferreira, PhD, Masters in Informatics
2018 and Computing Engineering, Faculty of Engineering, University of Porto
- 2016 **INTEROPERABILITY IN SOFTWARE APPLICATIONS FOR SMART CITIES: TOWARDS A** *Porto, Portugal*
– **REFERENCE ARCHITECTURE** by José Pedro Pinto, Supervised by Rosaldo Rossetti,
2017 PhD, Masters in Informatics and Computing Engineering, Faculty of Engineering,
University of Porto

PROGRAM COMMITTEES & REVIEWS

- 2017 **PC Member**, IEEE S3C 2017 - 2017 IEEE Summer School on Smart Cities *Natal, Brazil*
- 2017 **IEEE Intelligent Vehicles Symposium (IEEE IV'17)**, Reviewer *California, USA*
- 2017 **IEEE 20th International Conference on Intelligent Transportation Systems (IEEE ITSC 2017)**, Reviewer *Yokohama, Japan*

Conference Organization

- 2018 **Student Volunteer**, XP 2018 – 19th International Conference on Agile Software *Porto, Portugal*
Development
- 2018 **Conference Organization Chair**, DSIE'18 – 13th Doctoral Symposium in Informatics *Porto, Portugal*
Engineering
- 2018 **Advisor Board Member**, Talk a Bit – Technology Conference, 6th Edition (2018) *Porto, Portugal*
- 2017 **Student Volunteer (Media Coverage)**, EPIA 2017 – 18th EPIA Conference on Artificial *Porto, Portugal*
Intelligence
- 2017 **Web Communication Co-chair**, ACM CarSys 2017 – The Second ACM International *Utah, USA*
Workshop on Smart, Autonomous, and Connected Vehicular Systems and Services, part
of the The 23rd Annual International Conference on Mobile Computing and Networking
(MobiCom 2017)
- 2017 **Advisor Board Member**, Talk a Bit – Technology Conference, 5th Edition (2017) *Porto, Portugal*
- 2016 **Conference Chair**, Talk a Bit – Technology Conference, 4th Edition (2016) *Porto, Portugal*
- 2016 **Web Communication Co-chair**, 2016 IEEE 19th International Conference on Intelligent *Rio de Janeiro, Brazil*
Transportation Systems (ITSC 2016)
- 2014 **Student Volunteer**, Inter-University Programming Marathon (MIUP 2014) *Porto, Portugal*
- 2014 **Student Volunteer**, INForum - Symposium on Informatics (INForum 2014) *Porto, Portugal*

Invited Talks & Workshops

Information Systems and Software Engineering Seminars (SESI & SES)

HOSTED AT FACULTY OF ENGINEERING, UNIVERSITY OF PORTO FOR STUDENTS OF THE MIEIC & MESW DEGREES

Lisboa, Portugal

Sept. 2017

- **Seminar:** *How to Kill Your Privacy and IoT Your Home Along the Way.*

Pixels Camp 2017

HOSTED BY BRIGHT PIXEL AND BETA-I

Lisboa, Portugal

Sept. 2017

- **Workshop:** *PiHeadquarters or How to Take Control of your House with Raspberry Pi and Docker.*

OPOSEC Meetup: [0x33] – The Meet

HOSTED BY BLIP.PT

Porto, Portugal

Apr. 2016

- **Presentation:** *A hands-on approach on botnets for a learning purpose.*

ShARE World Seminar 2015 – “Europe vs. Asia: Grass Is Always Greener On The Other Side”

HOSTED BY SHARE GLOBAL STUDENT THINK TANK

FEUP, Porto, Portugal

March 2015

- **Workshop:** *How To Create Your First Personal Webpage.*

Pro Bono Activity

ACADEMIC

IEEE University of Porto Student Branch

Porto, Portugal

STUDENT MEMBER

2012 – Today

EXECUTIVE COMMITTEE (SECRETARY)

2013 – 2015

- As a voluntary member I had organized and co-organized some workshops (C#, Photography, \LaTeX , Web Development) and other events including *IEEE Day*, *IEEEExtreme* and *IEEEmadC*.
- As secretary I was also responsible for maintain the minutes of all meetings and other paperwork.

HUMANITARIAN

Luz da Vida Youth Group

Amarante, Porto, Portugal

FOUNDER MEMBER

2009 – 2011

- Founder and former active member, I had taken part of large number of activities on behalf of the village community.

Honors & Awards

INTERNATIONAL

2018 **427th (of 3350)**, IEEEExtreme – 24h Programming Competition 11.0, ieee.org/xtreme

Online – Porto, Portugal

2017 **847th (of 2815)**, Google Hash Code 2017, hashcode.withgoogle.com

Online – Porto, Portugal

2015 **189th (of 2477)**, IEEEExtreme – 24h Programming Competition 9.0, ieee.org/xtreme

Online – Porto, Portugal

2014 **Honorable Mention**, IEEEEmadC – Mobile Application Dev. Contest, ieeemadc.org

Online – Porto, Portugal

2013 **126th (of 2570)**, IEEEExtreme – 24h Programming Competition 7.0, ieee.org/xtreme

Online – Porto, Portugal

2013 **2nd Place**, European BEST Engineering Competition, ebec.best.eu.org

Warsaw, Poland

DOMESTIC

2011 **1st Place**, PmatE Mat12 – Mathematics Competition, pmate.ua.pt

University of Aveiro, Portugal

2009 **2nd Place**, PmatE Fis12 – Physics Competition, pmate.ua.pt

University of Aveiro, Portugal

Interests & Hobbies

Football Player

F.A.D.A. Amateur League

GRUPO DESPORTIVO E RECREATIVO DE TRAVANCA

2016 – 2017

Photographer

NATURE, URBAN EXPLORATION, EVENTS

2008 – Today

- 2010 - Exposition at Movimento d'Artes, Travanca, Amarante, Portugal
Promoted by the Cooperativa Cultural Vinha das Artes
- 2018 - Finalist at the Norte Multimédia Contest - Photography Category
Promoted by the Norte Portugal Regional Coordination and Development Commission (CCDR-N)