Henrique**Rocha**

Telecommunications and Informatics

about

Henrique Duarte Lopes Rocha

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WebSite
YouTube

languages

portuguese (native) 🇵🇹
english (fluent) 🇬🇧
french (A2) 🇫🇷

programming

💗 Java
(Android, PlayFramework,
SpringBoot, LWJGL, MapReduce,
GWT, AWS, JavaFX, Kurento
Media Server, Jetty and Jersey),
💛 Angular, C, C++ (OpenGL), C#
(XNA, Windows Forms, WPF,
lpsolve), Grails, VB, Python,
Scala, Scheme,
HTML, CSS (Bootstrap),
JavaScript (jQuery, AJAX,
WebGL, WebRTC), PHP
(Wordpress), GLSL, HLSL.

databases

DynamoDB, 💚 MongoDB,
MySQL, Oracle, Neo4j,
PostgreSQL, SQLite.

soft skills

Time Management
Problem-Solving
Team Player
Self Confidence
Adaptability

experience

European Organization for Nuclear Research (CERN) 🇨🇭

01 2019 (ongoing)	**Full-Stack development and Support** — FAP-BC-UI

Maintenance, development and support of applications related to recruitment and document management

06 2018 (6 months) — **Full-Stack and Database development** — IMPACT
Maintenance and optimization of an intervention management, planning and coordination tool. Experience with Grails and HazelCast (distributed cache)

04 2018 (4 days) — **CERN Spring Campus** — Riga Technical University, Latvia
Presentations about "Real time communications between web-browsers using WebRTC" and "Collision detection for a massive amount of objects within a 3D environment"

01 2018 (6 months) — **Full-Stack and Mobile Development** — DigiWare
Development of a work delivery tool for a warehouse at CERN. Experience with SpringBoot, Ionic Framework, Angular and Hibernate (with Oracle DB)

10 2017 (2 months) — **Front-end development and Business Intelligence** — APT
Maintenance and front-end development of a cost analysis tool for CERN activities. Experience with Grails, GWT and Pentaho

12 2016 (2 years) — **Applications Development** — PLAN
Development and support for a planning tool for CERN activities. Experience with SpringBoot, Handlebars, Hibernate (with Oracle DB). Used Event Sourcing (ES) and Command Query Responsibility Segregation (CQRS) design patterns.

10 2016 (2 months) — **Full-Stack Development** — PM-Support calendar
Maintenance of a calendar application for support time management. Experience with SpringBoot (integration with JIRA), Thymeleaf and Polymer

Bullray-CIT 🇵🇹

01 2016 (7 months) — **Applications Development**
Development of a user interface for a bank's security device that is synchronized with servers. Micro-controller sensors information receival through USB (org.usb4java), user interface with JavaFX and network camera discovery through nmap (using org.nmap4j)

11 2015 (2 months) — **Android Development**
Optimization and bug resolution of an Android application that uploads GPS, camera and micro-phone data in background.

08 2015 (2 months) — **Systems Development**
Development and configuration of a streaming server that supports receiving and recording video from authenticated users. I tried FFServer, nginx with rtmp module and Wowza Streaming Server, the final decision was Kurento Media Server with WebRTC.

02 2015 (20 months) — **Full-Stack Web Development**
Development of a solution for a generic incident handling server, support for real time monitoring through WebSockets. Experience with PlayFramework, MongoDB (with the official Java Driver), Maven, jQuery and Bootstrap.

11 2014 (4 months) — **Full-Stack Web Development**
Development of an architecture for a chat application. Experience with Android, PlayFramework, MongoDB (with Morphia), jQuery and Bootstrap. Message synchronization through HTTP long polling.

IST 🇵🇹

03 2015 (1 year)	**Master Thesis** **watch it**	IST
	Development of an interactive multi user video chat that supports recording, content overlay and a collaborative text editor. Used <u>Kurento Media Server</u> for mixing streams into a single one and detecting QR codes. Experience with <u>ot.js</u> for operation transformations (collaborative component). Other libraries used, <u>jquery.qrcode</u>, <u>vis.js</u>, <u>bootstrap-typeahead</u>, <u>codemirror.js</u> and <u>adapter.js</u> . Little experience with <u>strophe.js</u> for communication between web browsers and <u>XMPP</u> servers.	
04 2014 (6 months)	**Scientific Initiation Scholarship**	INESC
	Frontend Development for Provide Results's Bimk project. Experience with <u>PlayFramework</u>, <u>Revit API</u> and <u>GIT</u>.	
09 2013 (6 months)	**Scientific Initiation Scholarship**	CEG-IST
	Programming a Decision Analysis Software (MACBETH) with <u>WPF</u>. Development of an algorithm to suggest judgements based on past decisions using <u>lpsolve</u>.	

Other

08 2013 (2 weeks)	**Summer Work**	LCG
	Frontend development for a Decision Analysis Software using <u>ASP.NET</u>.	
11 2012	**Pizza Night Competition**	Microsoft Lisbon Experience
	2º place on Windows Phone Category with Infinity Edge game.	
08 2006 (1 month)	**Garbage Collector**	Jovens em Movimento, Oeiras
	Cleaning and maintenance of public spaces.	

edu**cation**

2013–2016	**Master of Science**	Instituto Superior Técnico - Taguspark
	Telecommunications and Informatics Engineering (Final Grade: 16 in 20)	
2009–2014	**Bachelor of Science**	Instituto Superior Técnico - Taguspark
	Communication Networks Engineering (Final Grade: 13.2 in 20)	

app**lications**

2015	**Bomb Raider**	Google Play
	Bomb Raider is a simple singleplayer and multiplayer game where the goal is destroying all enemies in the map. I used <u>OpenGLES</u> and <u>WiFi-Direct</u> to develop this <u>Android</u> game.	
2013	**OpenGlobe**	Instituto Superior Técnico
	Modeling Earth surface with GPS devices and topographic collected data. It is also possible to predict satellites position through ephemeris data.	
2012	**Infinity Edge (Windows Phone 7)**	windows marketplace
	First Person Shooter with spaceships made on my free time. I had experience with <u>XNA</u> and <u>HLSL</u>.	
2011	**Era of Empires**	Personal Project
	3D environment generator and Real Time Strategy game engine using <u>OpenGL</u>.	

int**erests**

3D Studio Max, Photoshop, Game Development, Web Design, Network Security, Jogging, Kayaking, Karate and Yoga.

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return 0;
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