

# Henrique Rocha

Telecommunications and Informatics

## about

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WebSite  
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## languages

portuguese (native)  
english (fluent)

## programming

♥ Java

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

## databases

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

## soft skills

Time Management  
Problem-Solving  
Team Player  
Self Confidence  
Adaptability

## education

2013–now	<b>Master of Science</b> Telecommunications and Informatics Engineering (Expected Grade: 16 in 20)	Instituto Superior Técnico - Taguspark
2009–2014	<b>Bachelor of Science</b> Communication Networks Engineering (Final Grade: 13.2 in 20)	Instituto Superior Técnico - Taguspark
2006–2009	<b>Secondary School</b> Science & Technology	Escola Secundária Luís de Freitas Branco, Paço de Arcos

## experience

01 2016 (ongoing)	<b>Applications Development</b> Development of a user interface for a bank's security device that is synchronized with servers. Microcontroller sensors information reception through <a href="#">USB (org.usb4java)</a> , user interface with <a href="#">JavaFX</a> and network camera discovery through <a href="#">nmap (using org.nmap4j)</a>	Bullray-CIT
11 2015 (2 months)	<b>Android Development</b> Optimization and bug resolution of an <a href="#">Android</a> application that uploads GPS, camera and microphone data in background.	Bullray-CIT
08 2015 (standby)	<b>Systems Development</b> Development and configuration of a streaming server that supports receiving and recording video from authenticated users through <a href="#">ffmpeg</a> . I tried <a href="#">FFServer</a> , <a href="#">nginx</a> with <a href="#">rtmp module</a> and <a href="#">Wowza Streaming Server</a> , the final decision was <a href="#">Kurento Media Server</a> with an <a href="#">RTP</a> endpoint for receiving video from network cameras and a <a href="#">WebRTC</a> endpoint for delivering the video to web browsers.	Bullray-CIT
03 2015 (ongoing)	<b>Master Thesis</b> Development of an interactive multi user video chat that supports recording, content overlay and a collaborative text editor. Used <a href="#">Kurento Media Server</a> for mixing streams into a single one and detecting QR codes. Experience with <a href="#">ot.js</a> for operation transformations (collaborative component). Other libraries used, <a href="#">jquery.qrcode</a> , <a href="#">vis.js</a> , <a href="#">bootstrap-typeahead</a> , <a href="#">codemirror.js</a> and <a href="#">adapter.js</a> . Little experience with <a href="#">strophe.js</a> for communication between web browsers and <a href="#">XMPP</a> servers.	IST
02 2015 (ongoing)	<b>Full-Stack Web Development</b> Development of a solution for a generic incident handling server, support for real time monitoring through <a href="#">WebSockets</a> . Experience with <a href="#">PlayFramework</a> , <a href="#">MongoDB</a> (with the official Java Driver), <a href="#">Maven</a> , <a href="#">jQuery</a> and <a href="#">Bootstrap</a> .	Bullray-CIT
11 2014 (4 months)	<b>Full-Stack Web Development</b> Development of an architecture for a chat application. Experience with <a href="#">Android</a> , <a href="#">PlayFramework</a> , <a href="#">MongoDB</a> (with <a href="#">Morphia</a> ), <a href="#">jQuery</a> and <a href="#">Bootstrap</a> . Message synchronization through HTTP long polling.	Bullray-CIT
04 2014 (6 months)	<b>Scientific Initiation Scholarship</b> Frontend Development for Provide Results's Bimk project. Experience with <a href="#">PlayFramework</a> , <a href="#">Revit API</a> and <a href="#">GIT</a> .	INESC
09 2013 (6 months)	<b>Scientific Initiation Scholarship</b> Programming a Decision Analysis Software (MACBETH) with <a href="#">WPF</a> . Development of an algorithm to suggest judgements based on past decisions using <a href="#">Ipsolve</a> .	CEG-IST
08 2013 (2 weeks)	<b>Summer Work</b> Frontend development for a Decision Analysis Software using <a href="#">ASP.NET</a> .	LCG
11 2012	<b>Pizza Night Competition</b> 2º place on Windows Phone Category with Infinity Edge game.	Microsoft Lisbon Experience
08 2006 (1 month)	<b>Garbage Collector</b> Cleaning and maintenance of public spaces.	Jovens em Movimento, Oeiras

## applications

2015	<b>Bomb Raider</b>	Google Play
	Bomb Raider is a simple singleplayer and multiplayer game where the goal is destroying all enemies in the map. I used <a href="#">OpenGL</a> ES and <a href="#">WiFi-Direct</a> to develop this <a href="#">Android</a> game.	
2013	<b>OpenGlobe</b>	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	<b>Infinity Edge (Windows Phone 7)</b>	windows marketplace
	First Person Shooter with spaceships made on my free time. I had experience with <a href="#">XNA</a> and <a href="#">HLSL</a> .	
2011	<b>Era of Empires</b>	Personal Project
	3D environment generator and Real Time Strategy game engine using <a href="#">OpenGL</a> .	

## interests

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

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return 0;
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