HenriqueRocha
Telecommunications and Informatics

about

Henrique Duarte Lopes Rocha

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WebSite
YouTube

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

experience

01 2016 (ongoing) — **Applications Development** — Bullray-CIT
1000€/month (part time)
Development of a user interface for a bank's security device that is synchronized with servers. Microcontroller 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** — Bullray-CIT
1000€/month (part time)
Optimization and bug resolution of an Android application that uploads GPS, camera and microphone data in background.

08 2015 (standby) — **Systems Development** — Bullray-CIT
1000€/month (part time)
Development and configuration of a streaming server that supports receiving and recording video from authenticated users through ffmpeg. I tried FFServer, nginx with rtmp module and Wowza Streaming Server, the final decision was Kurento Media Server with an RTP endpoint for receiving video from network cameras and a WebRTC endpoint for delivering the video to web browsers.

03 2015 (ongoing) — **Master Thesis** — IST
Development of an interactive multi user video chat that supports recording, content overlay and a collaborative text editor. Used Kurento Media Server for mixing streams into a single one and detecting QR codes. Experience with ot.js for operation transformations (collaborative component). Other libraries used, jquery.qrcode, vis.js, bootstrap-typeahead, codemirror.js and adapter.js . Little experience with strophe.js for communication between web browsers and XMPP servers.

02 2015 (ongoing) — **Full-Stack Web Development** — Bullray-CIT
1000€/month (part time)
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** — Bullray-CIT
1000€/month (part time)
Development of an architecture for a chat application. Experience with Android, PlayFramework, MongoDB (with Morphia), jQuery and Bootstrap. Message synchronization through HTTP long polling.

04 2014 (6 months) — **Scientific Initiation Scholarship** — INESC
385€/month (part time)
Frontend Development for Provide Results's Bimk project. Experience with PlayFramework, Revit API and GIT.

09 2013 (6 months) — **Scientific Initiation Scholarship** — CEG-IST
385€/month (part time)
Programming a Decision Analysis Software (MACBETH) with WPF. Development of an algorithm to suggest judgements based on past decisions using lpsolve.

08 2013	**Summer Work**	LCG
(2 weeks)	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	**Garbage Collector**	Jovens em Movimento, Oeiras
(1 month)	120€/month(full time)	
	Cleaning and maintenance of public spaces.	

applications

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>.	

interests

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

My mother said I should have a girlfriend...

```
System.out.println("... but I love programming.");
return 0; // ends gracefully
```