

HUGO PEIXOTO

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I have worked in several programming-related projects, as a professional and as a hobbyist. My interests and experience revolve around topics on **algorithms** (general combinatorics, graph theory and geometric computation), **artificial intelligence** and **web development**.

WORK EXPERIENCE

Software developer

NDrive Navigation Systems since October 2010

Currently, I design and optimize database schemas and queries. I am also developing a toolchain to help automate the map build system. I work with technologies such as Python, SQL and C++.

Intern

Fraunhofer AICOS from February to July 2010

I studied, implemented (in C++) and compared several algorithms for the vehicle routing problem applied to waste collection vehicles routing.

Flash developer

Bolos Quentes during May 2010

Implemented a multiplayer game about recycling and the environment using Flash and ActionScript 3.

Haptic software developer

Faculty's Department of Mechanical Engineering from 2009 to 2010

Developed a haptic-feedback enabled application for remotely controlling a motor. Built using C++, Qt and OpenGL.

Computer Graphics undergraduate teaching assistant

Faculty of Engineering of the University of Porto from February to June 2009

Helped students with their C++, Java and OpenGL problems, with special focus on lighting, texture mapping, shading and transformations.

Statistics gathering system developer

National Healthcare Regulation Entity during the summer of 2007

Wrote SQL queries for a module that generates reports on complaints for all portuguese healthcare entities. This web application was written in ASP.NET and MSSQL.

Web developer

Faculty of Architecture of the University of Porto from 2007 to 2008

In a team of three, I planned and developed a social web platform for the publication of architectural projects. We used Flash, XML, XHTML, CSS, PHP, MySQL and Python.

EDUCATION

Master in Informatics and Computing Engineering

Faculty of Engineering of the University of Porto from 2004 to 2010

Finished with an average grade of 17 out of 20.

EXTRACURRICULAR EXPERIENCE

President

Faculty's Students Union: Informatics Division from March 2009 to June 2010

I monitored and coordinated the group's projects and activities. I interacted with several faculty departments, looking for opportunities to start new projects.

Haptic device programmer

Faculty's Department of Mechanical Engineering from 2007 to 2008

I developed a game in which the user controls a physical pointer and tries to pop virtual balloons with it. The game was developed in C++, using OpenGL and the device's library.

Founding member

Faculty's Students Union: Informatics Division from 2006 to 2009

I developed several web applications to help gather funding for this group. On the World Usability Day of 2008, I helped with the organisation of a set of talks on the subject.

ADDITIONAL INFORMATION

Languages

Portuguese (native) and English (fluent)

Programming contests

I participated, with a team of three, in several programming contests held by the Association of Computer Machinery (ACM), from 2005 to 2009. Our best results were:

TIUP (Portuguese Inter-University Tournament)	1st place
MIUP (Portuguese Inter-University Marathon)	2nd place
SWERC (South-Western European Regional Contest)	17th place

I entered in Google Code Jam 2008, 2009 and 2010, a worldwide programming contest with more than 8000 participants. In both 2009 and 2010 I ranked among the **top 500 contestants**, being the best ranked Portuguese participant.

Open source contributions

I have contributed to multiple open source projects, such as **Ruby on Rails**, by submitting code patches. I also translated software packages to Portuguese, for the **Debian Project**.