

MIKAIL CAMPOS FREITAS

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OBJECTIVES To expand my knowledge, to obtain new skills and to perfect techniques. Evolution throughout the pursuit and overcoming of challenges as well as throughout contact with professionals from the same and different areas, learning and teaching in the process.

EDUCATION *Bachelor of Computer Science* 2008 — 2012
UNIVERSITY OF SÃO PAULO'S INSTITUTE OF MATHEMATICS AND STATISTICS (IME - USP)
Course Completion Assignment: *Solving the PSAT problem with assistance of the free software MiniSat* [[link \(portuguese only\)](#)]
• Source code integration of free software tools to optimize one solution to a probabilistic variant of the SAT problem.

COLLEGE PROJECTS *Simple 2D game with C* 2010 (4 months)
Lead Programmer
2D game with simple physics where two players compete with each other for points for saving survivors from a shipwreck. Made with C and the Allegro multimedia library (graphics and input). [[link](#)]
Augmented reality 3D game with ActionScript 3 2010 (6 months)
Solo Programmer
Augmented reality 3D puzzle game where the player has to make a ball reach the objective going through obstacles in the virtual inside of a cube. Made with ActionScript 3 and the following libraries: JigLib for 3D physics, Papervision3D for 3D graphics, FLARManager for augmented reality. [[link](#)]
First Person Walking Simulator with C++ and OpenGL 2012 (5 months)
Solo Programmer
Interactive simulation with basic physics enabling the user to walk around the buildings of the USP's Institute of Mathematics and Statistics (outside only) with optional simulation for rain and fog. Made solely with C++ and OpenGL. [[link](#)]

PERSONAL PROJECTS *Multiplatform game with C++* 2012 — present (very sparse)
Solo Programmer
2D platform game with it's own physics and lightning effects engines. Multiplatform project that utilizes OpenGL, GLSL and the SFML (C++) library for input and graphics management. Currently has a version in development stage for Mac OS X. [[link](#)]
iOS game with Swift 2015 — present (sparse)
Solo Programmer
2D platform *infinite runner* game using the SpriteKit framework from Apple for graphics and physics, with it's own engine for procedural content generation such as obstacles, background graphics and etc. [[link](#)]

EXPERIENCE *Mobile Developer* 2013 - 2014
VTX BRASIL
• *iOS application for IM and video calls* (6 months)
Implementation of the user interface and integration with the Liblinphone library for SIP (*Session Initiation Protocol*) based communication.
• *Android application for multiple-device split video playback application* (3 months)
Implementation of the user interface and utilization of the AllJoyn framework for communication between the devices and management of the playback synchronization in each device using NTP (*Network Time Protocol*).
Head of iOS Development 2015 — present
VTX BRASIL
• *Product conception and direction of development*
• *Definition and establishment of iOS development standards, as well as a reusable code base, to ensure quality and agility of the team's code production*

- *iOS application for engagement in retail through innovative technologies* (20 months)
Application conception, architecting and development. Application conception in conjunction with the client and the design team. Implementation of the user interface, integration with our own framework for information extension in printed media, simple beacon management for integration with a system that gives salespeople access to basic informations of the stores visitors.
- *iOS framework for digital extension of information in printed media* (4 months)
Conception, architecting and implementation of the extension framework, which in turn is based on the augmented reality framework Metaio. iOS front of an ecosystem of tools that aims to integrate with the printed media production process of the clients to digitally extend it.
- *iOS application for advertisement of retail deals* (4 months)
Application architecting, development and management of development. Implementation of the user interface and management of the implementation of the integration with our own server for accessing retail information.

SKILLS - *Languages and syntaxes:*

Fluent: Objective-C, C, regex

More Familiar: Swift, Python, C++, Java, Scheme, Erlang, ActionScript 3, L^AT_EX, GLSL

Less Familiar: CUDA, Assembly, Prolog, Smalltalk, Pascal, Bash

- *Frameworks, libraries and technologies:*

iBeacon, SFML, Allegro, NumPy, JigLib, Papervision3D, FLARManager, AllJoyn, Vuforia, OpenCV, Liblinphone, Augmented Reality

- *Softwares and tools:*

Git (advanced), gnuplot, Xcode, Eclipse, ADT, FlashDevelop, Sublime Text, TextMate, vim

- Intermediate knowledge of OpenGL and shaders

- Development in Ubuntu and Debian systems (4 years) and Mac OS X (5 years)

- Intermediate knowledge of cryptography

- Intermediate-advanced image editing in Adobe Photoshop

- Fluent english, basic japanese

AWARDS - Bronze medal in the *Informatics Brazilian Olympics* (2007)

- Silver medal in the *Astronomy Brazilian Olympics* (2006)

- Silver medal in the *Astronomy Brazilian Olympics* (2007)

- Honorable Mention in the *Physics Brazilian Olympics* (2007)

- Progressed to the second stage (of three) of recruitment by Microsoft in IME - USP (2011)

- Progressed to the last stage of recruitment by Microsoft in IME - USP (2012)