

Skills	Languages: Java (7+ years), C/C++ (4+ years), Bash (4+ years), SQL (3.5 years), Scala (2 years), R (1 year), C# (1 year) Experience: Data Structures, Design & Architectural Patterns, Backend Development, Data Analysis, Parsing	
Education	Ph.D. in Computer Engineering, University of Waterloo , Canada M.Sc. in Computer Science, Federal University of Minas Gerais , Brazil B.Sc. in Computer Science, PUC Minas , Brazil	Sep. 2010 – Jun. 2016 Feb. 2005 – Sep. 2007 Feb. 2000 – Jul. 2004
Industrial Experience & Projects	Researcher (Intern), LogicBlox <ul style="list-style-type: none"> • LayerBlox Compiler: Created a statically typed DSL for composing components in LogiQL (the DDL/DML language of the LogicBlox DBMS). Implemented a production-ready compiler (lexer+parser+AST model+semantic checker+code generator, 20 KLOC in Java) for the DSL and a JUnit test suite with 100% method coverage. Further project description at Udacity's Youtube channel: http://tinyurl.com/layerblox Software Engineer II, Vetta Technologies <ul style="list-style-type: none"> • RCOE School Management Platform: Worked in porting RCOE's (Riverside County of Education) desktop-based school management app to the Web. Used HTML+Javascript (frontend) and iBatis ORM+Java (backend); created JUnit tests for all controllers and DAOs; used Apache Wicket as the Web framework • Prepaid Cell-phone PIN Number Importer: Designed and implemented a multi-threaded feature to import, cryptograph, store and distribute PIN numbers to the end-sales points of Vivo cell phone provider (+79 million users). Used HTML+Javascript (frontend) and Java+iBatis ORM (backend); created JUnit tests for all controllers and DAOs; used the Struts MVC framework • Cryptography Library: Implemented a library on top of javax.crypto to facilitate the composition of different cryptography methods Software Engineer I, Capgemini <ul style="list-style-type: none"> • SIS: Maintenance of C-based agents to parse and dispatch telephony center commands • Tape Record Retriever: Collected user requirements and created all the use cases and design of a system to recover data from the tape history (+13 Tera bytes of data) of Oi, one of the largest telephone companies in South America (+50 million users) 	Feb. 2015 – Apr. 2015 Aug. 2007– Apr. 2008 Jul. 2004 – Feb. 2005
Academic Experience & Projects	Postdoctoral Fellow, University of Waterloo <ul style="list-style-type: none"> • Surveys and interviews with open-source developers to validate research results • Data analysis in R, running exploratory analysis & hypothesis tests Research Assistant, University of Waterloo <ul style="list-style-type: none"> • Smart Fixer: Changed the C++ eCos OS configurator to add a priority fixing mechanism • Kconfig Info: Changed the C-based Linux kernel configurator to extract metadata of config-options. Performed the same approach for axTLS, Toybox, and uClibc • Git Miner: Created Java libraries, command-line programs, and Bash scripts to retrieve, parse, clean, and mine data from Git repositories. Data analysis was performed after loading all data in PostgreSQL, using R and specialized packages such as RPostgreSQL, sqldf, ggplot, exactRankTests, and reshape • CDL Type Checker: Created a tool (in Scala) to statically find configuration mistakes due to type errors in the config-options of the eCos OS Teaching Assistant (10 terms), University of Waterloo <ul style="list-style-type: none"> • TAed Foundations of Software Engineering, Embedded Microprocessor Systems, Compilers, Fundamentals of Programming, Software Engineering, and Software Design & Architecture. Technologies taught or used when creating marking infrastructure: Scala, Bash, Java, UML, C#, Android SDK/Android Studio Lecturer, Itaúna/PUC Minas/IFMG/UFVJM <ul style="list-style-type: none"> • Taught courses in Algorithms, Programming Languages, Software Engineering, Compilers, and Theory of Computation 	Jul. 2016 – Present Sep. 2010 – Jun. 2016 Sep. 2010 – Aug. 2015 Aug. 2004 – Jul. 2010
Honors & Awards	<ul style="list-style-type: none"> • Best research paper award at the ACM Modularity'15 paper • Bronze medal in the Student Research Competition at the ACM Modularity'15 conference. The competition was sponsored by Microsoft Research 	
Publications & Open-source Projects	<ul style="list-style-type: none"> • http://tinyurl.com/leonardopassos-pubs • http://github.com/lpassos • http://bitbucket.org/lpassos 	