SANTIAGO BRAGAGNOLO

28, Rue Clovis Hugues ⋄ Lille, 59800

(+33) · 7 · 83 · 14 · 45 · 35 ⋄ santiagobragagnolo@gmail.com

BIOGRAPHIC DATA

Complete name	Santiago Pablo Bragagnolo
Birth date	16 november 1982
Nationalities	Argentinian, Italian
Visiting Melbourne	1 July - 14 July 2017. Face to face interview is possible on these days.
EU eligibility	YES

CONTACT

Skype	santiago.bragagnolo
Linkedin	linkedin.com/in/santiagobragagnolo/
Portfolio	santiagobragagnolo.wordpress.com
Blog	knowledgeconvergence.wordpress.com
Github	github.com/sbragagnolo
SmalltalkHub	smalltalkhub.com/#!/ sbragagnolo

EXPERIENCE BRIEF

Software Industry experience	11 years
Research experience	4 years
Effective engineering study	3.5 years
Teaching programming on university	5 years

TECHNICAL STRENGTHS

Paradigms	Object Oriented, Functional
Languages	Pharo, Scala, Java, C/C++, Javascript, Python
Application Middleware	Tomcat, JBoss, Google App Engine
MVC Frameworks	Seaside, SpringMVC, Grails, Play2
Web Client Frameworks	Backbone.js, Underscore.js, JQuery
SQL Databases	MySQL, PostgreSQL, Oracle, SQLServer
Blockchain Databases	Ethereum
NO-SQL Databases	MongoDB, BigTable, Db4o
Tools	Metacello, Monticello, Make, Maven, SVN, GIT, Eclipse
Processing Architectures	Multithreading, Multiprocesses, Real time
Software Architectures	REST, Service, Client & Server, Data Processing (ETL), Actors
Quality/Testing	SUnit, JUnit, Jenkins
IDEs	Pharo, Squeak, Dolphin, Eclipse, Netbeans, Visual studio
Operative system	Ubuntu/Debian Linux, CentOS Linux / Redhat enterprise

METHODOLOGY STRENGTHS

Working methodologies	Agile, KanBan, XP, Pair programming
Software design	Domain Driven Design
Quality assurance	Continuous Integration, Continuous Delivery
Development	Test driven development, Behaviour driven development, Lean development

YET UNUSUAL EXPERIENCES

| **Blockchain - Ethereum** | INRIA |
| **Indoor robotics** | INRIA + Ecole de mins de douai. |

LANGUAGES

Spanish	Native
English	Written and spoken fluent competence
French	Written and spoken fluent competence
Chinese	spoken basic low competence

CURRENTLY WORKING ON

INRIA   April 2015 - currently
Position Definition - Technological transfer Engineering

Research and applied research engineering position, meant to develop bilateral contracts in between INRIA and enterprises.

To mature and adapt the technologies developed by different INRIA's research teams for satisfying the needs of the industry.
· To participate in the presentation the INRIA's technological offer.
· https://www.inria.fr/en/centre/lille/news/inriatech-initiative-in-lille-inria-s-support-for-research-and-innovation-award

INRIA SPIRALS - Technological transfer project   June 2017 - Currently
Energy consumption analysis as a service

· Power API enhancement (http://powerapi.org/)
· Development of a service platform for serving Power API.
· Project developed on Scala + AKKA and Java.

INRIA RMOD - Technological transfer project   October 2016 - Currently
Blockchain's Smart contract analysis

· Research analysis over the blockchain's smart contracts subject.
· Prototype development for exploring research possibilities.
· Development on Solidity, Javascript and Pharo.
· Conception and implementation of a Solidity's language interpreter for the generation of inspection tools.
· Conception and implementation of a Ethereum virtual machine simulator with advanced debugging utilities.
· Conception and implementation of a Ethereum virtual machine Byte code decompiler.
· Conception and implementation of graphical navigation tools for Ethereum.
· Conception and implementation of query language for Ethereum.
· Writing of scientific articles
· The ongoing work has been presented on PharoDays 2017 conference (http://pharo.org/2017PharoDays) as "Navigating the blockchain"
· https://www.slideshare.net/sbragagnolo1/a-living-programming-environment-for-a-living-blockchain

INRIA Non-A - Technological transfer project   December 2015 - Mars 2016
Sephyr - Intelligent table

· Conception and development of a voice commanded robotised table
· Modification and adaption of local and global planning algorithms for the specificity of the domain
· State machine based protocol analyser for voice command recognition

· Voice command module driver.
· Robot's physical model definition
· Developed with Python, C++ and Pharo, Designed to run in a ROS environment.
· https://www.inria.fr/en/centre/lille/news/zephyr-the-intelligent-voice-activated-overbed-table

Inria RMOD -Maturation of technology   June 2016 - Currently
Scale

· Library for scripting and REPL for Pharo
· Developed with Pharo and BASH.
· Tested and automatically builded by travis
· https ://github.com/guillep/Scale

INRIA Non-A -Maturation of technology   April 2015 - Currently
MakROS

Data-transfert based component oriented framework for robotic behaviours ROS compatible.

Using for development Pharo. Conceived for fast behaviour prototyping.
· Includes multiple default components, giving full support to the basic ROS library needs, as TF/TF2, in a component fashion.
· You can check it out from:
· https://github.com/sbragagnolo/Makros

INRIA Non-A   April 2015 - Currently
MetaDDS/SimpleDDS/ROSDDS

Skeleton and canon implementation of a Data Delivery Service (publisher/subscriber) framework and it full ROS and Pharo smalltalk specific implementation. Based on ROS standard and OMG-DDS standard.

Using for development Pharo
· Extra features for robustness as node reconnection and master restart recovery.
· Tested and automatically builded by travis
· You can checkit out from:
· https://github.com/sbragagnolo/MetaDDS
· https://github.com/sbragagnolo/SimpleDDS
· https://github.com/sbragagnolo/ROSDDS

Inria RMOD - Maturation of technology   April 2015 - Currently
TaskIT

· Maintenance and development of TaskIT framework.
· TaskIT is an object oriented framework for concurrent and parallel processing. Simple, debuggable and powerful, mean to meet real time requirements in a Green thread based environment.
· https ://github.com/sbragagnolo/TaskIT/main

Inria RMOD Maturation of technology   June 2016 - December 2016
Android Pharo VM

· Conception and development of the adaption of the CogVM virtual machine for running on Android
· Developed on Java Android, C++ and Pharo.
· Building automation.
· Tested and automatically builded by travis

· https ://github.com/sbragagnolo/pharo-vm

Inria Non-A - Maturation of technology   April 2015 - June 2016
Trajectory algorithms

· Implementation of trajectory algorithms based on adaptive control methods
· Developed in C++ . Prepared to run on ROS environments.
· Tested and builded automatically on a private Jenkins

INDUSTRY AND RESEARCH EXPERIENCE

Ericsson   May 2014 - September 2014
Senior Java and C++ consultant developer   *Malaga, Spain*

· ERA (Ericsson ran analyzer) Project. C++ and Java based high-performance client
· TPS (Trace processor server) Project. Java high-performance server for trace processing (system that faces problems of teras of data) with some IronPython for processing text files, with part of processing over hadoop and hive.
· ODG (OSS Data gateway) Project. Project that analyze data from OSS servers. Also Java high-performance server.
· All of these project are highly Multithreaded and based on distributed processing.
· The data containers of these project are based on Hadoop File system.
· Most of the data processed is reduced and stored into the client mapping data from several servers with workflow processing. (Based in ETL pattern)
· TDD and Continuous delivery evangalizer.
· Working under Agile with Scrum methodology

Ecole des mines de Douai   September 2012 - February 2014
Software Research Engineer, Robotics   *Douai, Nord-Pas-de-Calais*

· I am in charge of the development of the project RoboShop (http://car.mines-douai.fr/RoboShop), a robotic system for aiding persons to navigate into unknown spaces. I do organize the work also of two persons more, an intership and a post-doc.
· My responsibilities are planning, engineering, development and technologic report writing for the projects RoboShop and PhaROS (http://car.mines-douai.fr/PhaROS).
· PhaROS is a framework for developing robot solutions for Pharo Smalltalk on the robotic middleware ROS. It implements a real time distributed architecture.
· The project RoboShop was presented in Picom and Vad Conext 2013 (Some content about http://car.mines-douai.fr/2013/11/roboshop-demo-16oct2013/)
· The project PhaROS has been presented by me in FOSDEM 2014, (https://fosdem.org/2014/) as PhaROS Towards Live Environments in Robotics in the Smalltalk devroom
· https://www.slideshare.net/sbragagnolo1/fosdem-1
· It was also presented by Dr Noury Bouraqadi on different conferences
· https://www.slideshare.net/nourybouraqadi/robo-shop
· https://www.slideshare.net/nourybouraqadi/roboshop-helper-robot-in-a-shopping-mall
· From this position i also contribute with the project TaskIT (http://smalltalkhub.com/#!/ sbragagnolo/TaskIT), which is a project for managing parallelism and concurrence in a Pharo smalltalk environment.
· The used technologies for the robot side are: Pharo, ROS, Python and C++. For the graphical interface: Pharo, Seaside, Bootstrap, Javascript, html+css3

Fanwards (http://www.fanwards.com/)   November 2011 - August 2012
Software engineer, gamification   *Ciudad de Buenos Aires, Argentine*

- I am in charge of design and implementation of the web application Fanwards, front and backend. working with the CTO.
- Using for front end heavy weight clients based on javascript technologies such as Backbone.js, jquery, underscore.js , mustache and for the view HTML5 and CSS3.
- Using for the backend a Google App Engine (GAE) Server with Scala & Java, Objectify for the mapping between objects and google's BigTable, Spring MVC and RestFul frameworks for routing and dispatching of exposed and scheduled behaviours.Finally twitter4j and facebookRest for interacting with social networks.
- From this position i have developed: a full intelligent single-page client based on javascript, a small functional library for javascript implementing some of the common haskell features (partial application, curryfication and function compositions), really useful abstractions for AJAX request processing, also developed a social network crawler for analysing users comments for branding (with heuristics to analyse the meaning of each comment).
- From this position i also participate not just in software design, planning and architecture but also in the gamification process of the application.
- During all the development of the application we used Scala BDD and TDD techniques with great success.
- Crossing data for brand reports with Map reduce.
- You can watch the most important part of the implementation in the following example `https://www.facebook.com/pages/Melee-Island-Inc/252598398140724?id=252598398140724&sk=app_232320516837452`

Aufiero Informatica   March 2011 - November 2011
Software architect, designer & developer   *Ciudad de Buenos Aires, Argentine*

- This company is a small software factory and AVG antivirus reseller for latino america. I worked two times in this enterprise, look down in previous experiences to look my progress. In this case i was also in charge of a 5 person team.
- Reseller/Partner management system based on Groovy on Grails technology and communicating to software legacy done in PHP.
- Mail campaign web system for internal usage (For AVG campaigns). Done in Groovy and Grails / Jasper reports
- Email send system multi-engine, auto-deployable with load balance and mail tracking. Done in Groovy and Java, using Apache Email.
- Single sign on system for our different platforms - Done in Groove and grails.

Buscouniversidad .com   January 2011 - March - 2011
Developer & system designer   *Ciudad de Buenos Aires, Argentine*

- In this work i'am in charge of designing of Data base structure, SQL queries. In the design of the directory system (such as OLX, Craiglists, etc, but specific for universities) based on PHP with Zend framework, sphinx and Javascript with JQuery. And in the development of processing tools
- From this position i had developed mail processing based on patterns for recognising rejects and angry people (python); an easy code generator for Zend framework; the administration application of the site.

Aufiero Informatica   March 2007 - December 2010
Software designer & developer - Project manager   *Ciudad de Buenos Aires, Argentine*

- In this company i had being in several projects, always as software designer and developer, and in the last year also as architect.
- The followings are the project i did and my role
- Accountant management system - Designer and developer - Java, Flex 3.1 JBoss

- Editorial integral management system (stock, accounting, finances, sells, shopping, etc) - Maintainer, developer and DBA - visual basic 6.0 / sql server / Crystal reports. Implementation of ETL pattern for making up a small datawarehouse for sales analysis.
- Intranet tool for client management Pharo/Squeak - PostgreSQL - Seaside.
- Classified ads management system - Maintainer, developer - Net Framework 3.0 C# Nhibernate Windows form
- Billing online system - Software designer, developer - PHP, CakePHP, Javascript jquery. In this project we were contracted for offshoring by Ixole, a company from Barcelona. I worked in this case also as face of our team, dealing about deadlines and requirements. This project lasted one year.
- Electronic Invoice system (Based on the local taxes system) - Software designer, developer - Java, Groovy and Grails / jasper reports.

MSA   2006
DBA Oracle 9i & Postgres SQL   *Ciudad de Buenos Aires, Argentine*

- In this company i had in charge the administration of three productive databases related with ticket system (kind of ticketek but with less stress)
- My tasks were Data base monitoring, Backup, SQL Security, Database and query tuning for the productive systems (Oracle 9i) and making up configurations for eventual projects (Usually Postgres SQL)
- Parallely i had some small responsibilities in eventual projects

Research for decision   2003 - 2005
Developer   *Ciudad de Buenos Aires, Argentine*

- In this company my main responsibility was the development of polls in eole/saxophone (language and poll system).
- Also i was in charge of maintaining servers, machines and network.

Freelance   2002 - 2009
Developer, Designer, Architect, DBA & Client management   *Ciudad de Buenos Aires, Argentine*

- This are the projects i have developed as independent, several of them still in usage, and i maintained almost them for one to two years.
- November 2002 to July 2003 - Nutritional preparations management system for a Parenteral Laboratory (UNANUT) - Visual Basic & Microsoft Access (Supported until 2005)
- June 2003 to August 2003 - Stock management system for a box factory - Visual Basic & Microsoft Access (Supported until 2004)
- July 2009 to March 2010 - Certification and courses management system SFAP - PHP (http://www.facpce.org.ar/) (Supported until 2011)

EXPERIENCE IN OPEN SOURCE - COMMUNITY PROJECTS

On my own   October 2014 - Currently
MakROS

Data-transfert based component oriented framework for robotic behaviours ROS compatible.

Using for development Pharo
- Includes multiple default components, giving full support to the basic ROS library needs, as TF/TF2, in a component fashion.
- You can checkit out from:

· https://github.com/sbragagnolo/Makros

On my own   October 2014 - Currently
MetaDDS/SimpleDDS/ROSDDS

Skeleton and canon implementation of a Data Delivery Service (publisher/subscriber) framework and
it full ROS and Pharo smalltalk specific implementation. Based on ROS standard and OMG-DDS
standard.

Using for development Pharo
· Extra features for robustness as node reconnection and master restart recovery.
· Tested and automatically builded by travis
· You can checkit out from:
· https://github.com/sbragagnolo/MetaDDS
· https://github.com/sbragagnolo/SimpleDDS
· https://github.com/sbragagnolo/ROSDDS

On my own   Feburary 2014 - Currently
TaskIT

Maintaining and enhancing TaskIT with Guillermo Polito

TaskIT had born and grow during the development of PhaROS during my job at Ecole des mines,
and it was mean to be object oriented, easy to use, and with powerful, well tested, simple and reliable
processing abstractions, in order to serve in a real-time processing environment.
· As well it provides some experimental functionalities for process understanding as the plan definition.
· We are currently working on Task-IT 2.0, which will have a great new suit of concept for process
management
· You can checkit out from https://github.com/sbragagnolo/TaskIt

On my own   Mars - May 2014
Making work Scala + Play + MongoDB   *Malaga*
· Putting together some existant technology for a project on my own
· Fully developed with Scala and Play. It has some java dependancies (Jackson for JSon marshalling)
· https://github.com/sbragagnolo/mongodb

On my own   June - August 2014
Social secure plugin for Play running on top of MongoDB   *Malaga*
· Social secure backend implementation for running on mongoDB
· Fully developed with Scala and Play.
· https://github.com/sbragagnolo/SocialSecurePlayMongo

Google summer of code   May 2012 - September 2012
Type inference on dynamic languages   *Ciudad de Buenos Aires, Argentine*
· I am in charge of design, planning, research, engineering, responding to my mentor Nicolas Passerini
(npasserini@gmail.com).
· The proposal is registered http://gsoc2012.esug.org/projects/type-inference
· From this project i have implemented a concrete type inference system for Pharo Smalltalk 1.4, a
graph of methods to be executed as response of the analysis of a given expression, and an object
oriented logger, which is now being used in several Pharo projects. I also took the work of blogging
all the work progress in a blog. This project was presented in the conference ESUG 2012 - Gent -
(http://www.esug.org/wiki/pier/Conferences/2012)

· Site - http://concretetypeinference.blogspot.fr/.
· Concrete type inferencer and the call graph analyser (Kwisatz Haderach) - http://ss3.gemstone.com/ss/ConcreteTyp
· Paule le poulpe; Object oriented Logger - http://smalltalkhub.com/mc/sbragagnolo/PLP/main

ESUG financed Project   May 2011 - September 2011
Developer in DBXTalk   *Ciudad de Buenos Aires, Argentine*
· In this project i am in charge of design and implementation of the scaffolding for DBXTalk (DBXTools)
  and the bridging with Glorp framework.
· DBXTalk (http://dbxtalk.smallworks.com.ar/) is a bridge that gives support for the database systems
  to mainstream Squeak and Pharo smalltalk.
· This project with the porting of Glorp to Pharo (by Guillermo Polito) were presented in ESUG 2011 -
  Edimburgh (http://www.esug.org/wiki/pier/Conferences/2011)

FACPCE financed Project - Used for SFAP   2009
Developer in Cornucopia framework   *Ciudad de Buenos Aires, Argentine*
· PHP Cornucopia. Is an already obsolete full stack framework. It provides:

  • Collections

  • Simple ORM configurable by metadata

  • Simple dependency injector

  • HTML reification for composing and HTML generation

  • Javascript generation by metadata (Requirements, etc)

  • Request reification as object

  • Session reification as object
· Check it out from: https://github.com/sbragagnolo/cornucopia

On my own for an university topic   2007
Developer in C Objects framework   *Ciudad de Buenos Aires, Argentine*
· C Objects. Is a framework to provide several object oriented programming features to C. It provides:

  • Collections (Dictionary, List)

  • Strings

  • Server, with node objects for managing requests

  • Automatons for simple language interpretation

  • Threads reification

  • Mutex and Conditional reifications

  • Error management (managed by signals, giving the change to register error handlers and to raise
    errors)

  • Memory management.
· Checkit out from: https://github.com/sbragagnolo/c-objetos

TEACHING EXPERIENCE

Universidad Tecnologica Nacional (UTN)   March 2007 - July 2012

Adhonorem teaching assistant at Advanced programming techniques   *Ciudad de Buenos Aires,*
Argentine

· Teaching the next concepts, techniques and tools

- Object oriented programming
    - Patterns
    - Methodologies TDD/BDD, DDD, Agile
    - Re-factors
    - Meta-programming
- Basic architectures
- Technologies
    - Maven
    - IDEs - Eclipse, Idea, Netbeans
    - JUnit, ScalaTest
    - SVN & GIT
- Dynamic languages
    - Scala
    - Python
    - Smalltalk
    - Self
- Modern applied concepts
    - Traits and Mixins
    - Lambdas / anonymous functions

Universidad Tecnologica Nacional (UTN)   March 2007 - December 2011

Adhonorem teaching assistant at Programming paradigms   *Ciudad de Buenos Aires, Argentine*

· Teaching the next concepts, techniques and tools

- Object oriented paradigm
    - Pharo Smalltalk
- Functional oriented paradigm
    - GHC
    - WinHugs
- Logical oriented paradigm
    - Swi prolog

Fundacion Proydesa   March 2006 - November 2007

Oracle DBA Instructor   *Ciudad de Buenos Aires, Argentine*

· In this foundation i worked as instructor of three of the four basic modules of Oracle for Database administration
· SQL (Module 1)
· Engine Architecture (Module 2)
· Tuning (Module 4)
· I also participate as instructor in the instruction of new instructors for modules 1 and 2.

EDUCATION

Universidad Tecnologica Nacional (UTN) - Ciudad de Buenos Aires - Argentine   *January 2004 - Aborted on 2011; having papers to proof 7 semesters of career of 10 semesters*
Software Engineer

Ing. Otto Krause - Ciudad de Buenos Aires - Argentina   *December 2001*
Technic in computation