

# Jorge Silva

10+ years of experience meeting business needs through R&D in new and emerging technologies.

## EXPERIENCE

### Myplanet Digital Inc. — Technical Lead, Ventures

OCT 2019 - PRESENT

- Conducted technical due diligence and prepared technical roadmaps for incoming candidate investments in the areas of IoT, AI, Conversational Interfaces and Mixed Reality.
- Developed proof of concepts and reference designs in support of fundraising and partnership activities.

### Peraso Technologies Inc. — Senior DevOps Engineer

OCT 2018 - SEPT 2019

- Implemented automated OS installation and recovery pipeline for embedded Linux hardware testing lab, using iPXE and Python.

### Alea Labs Inc. — Senior Firmware Engineer

MAY 2018 - SEP 2018

- Used Python and MicriumOS to incorporate real-time debugging and scripted compilation support into the product's Mighty Gecko chipset.

### Komodo OpenLab — Co-Founder & Technical Lead

NOVEMBER 2010 - MAY 2018

- Created a functional prototype using an off-the-shelf Bluetooth LE controller board and 3D-printed parts.
- Led consultants, designers, engineers, manufacturers and suppliers across three continents, through the successful completion of recurrent product development cycles for the [tecla](#) product line, including the ideation, planning, prototyping, implementation, testing and commercial launch of three electronic devices, two Android apps and one iOS app.
- Implemented 'hardware in the middle' continuous integration (CI) pipelines, using Python, CircleCI and embedded Linux, to enable automated delivery of firmware and mobile app builds.
- Led the development of the flagship product's ARM Cortex M0/4 RTOS firmware, companion mobile apps, and custom AOSP builds.

### OCAD University — Inclusive Technology Developer

MARCH 2008 - MAY 2015

Created proof-of-concept access solutions for people with disabilities, using off-the-shelf gaming consoles and controllers [[clip1](#)] [[clip2](#)].

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## TECHNOLOGY STACK

OS: OSX, Linux, Windows

**Scripting & Languages:** Python, Java, C/C++, Bash, CMD, PowerShell, Gradle, iPXE, Javascript

**IDEs:** IntelliJ, Eclipse, Atom, VisualStudio, Mbed, Arduino

**CI/CD:** CircleCI, Teamcity, Docker, Webhooks, YAML, GCC/ARM, Google Play Services

**WebDev & APIs:** Alexa, Polly TTS, IFTTT, Harmony, Shopify, REST/JSON, Postman, Flask, Node, HTML, CSS, jQuery, React, ngrok

**Backend Services:** Firebase, Losant, AWS

**Android Dev:** Android Studio, NDK, AOSP (custom ROMs), build flavours/variants, Bluetooth/LE, Firebase, JUnit, UIAutomator

**CVS & Reporting:** git, JIRA, Asana, MS Office, Google Docs, Trello

**UI/UX Design:** Draw.io, Sketch, Zeplin, Marvel, Invision

**Physical Computing:** AVR, ARM Cortex M0/4, STM32, Nordic nRF51/52, GCC/ARM toolchain, FreeRTOS, Arduino, Raspberry Pi, Embedded Linux..

**Embedded Protocols:** UART, USB, BLE, SPI, I2C, AT, MQTT over TCP/IP

**Circuit Peripherals:** LiPo Chargers, Power Sources, USB, Flash Memory, Bluetooth/LE, WiFi, GSM, GPS, PWM, ADC, DAC, LEDs, Sensors, Actuators

## EDUCATION

### University of Toronto — PhD & MASc, Engineering

AUGUST 2002 - JUNE 2008

- Developed a statistical inference algorithm that enables control of an object in 3D space using a single button/switch [[paper](#)].
- Customized a videogame for testing research hypotheses [[clip](#)].
- Developed a machine-learning algorithm to detect activities of daily living from real-time video streams [[abstract](#)]

**Digital Fabrication:** Thinkercad, LibreCAD, STL, DWG, 3D Printing, Laser Cutting

**Collaboration:** Slack, Hangouts, Skype, Zoom

**PCB:** Eagle, Iron & Reflow Soldering, Debugging (JTAG, Oscilloscope, Logic Analyzer)

**Product Compliance:** UL, CE, FCC Part 15

## AWARDS

**Pioneers for Change (Innovation).** Skills for Change, Canada, 2014.

**Innovation.** Tetra Society of North America, Canada, 2009.

**Best Scientific Paper.** National Biomedical Engineering Congress, Mexico, 2002

## INVITED LECTURES & SELECT MEDIA COVERAGE

‘How an iPhone changed a paralyzed veteran's life,’ Mashable, Nov. 11, 2015 [[link](#)]

‘Lending an (un)helping hand.’ TEDx Montréal Quartier Latin, Montréal QC., Canada, October 1, 2010 [[clip](#)]

## PATENTS

‘A configurable device switching mechanism that enables seamless interactions with multiple devices’ US Filing 62592938, Nov. 30, 2017

## LANGUAGES

English (Native), Spanish (Native)

## PORTFOLIO

[ijdoc.github.io](http://ijdoc.github.io)

## SKILLS

- Expert in git version control, technical documentation and incident management using MS Office, Google Docs, github, JIRA and Asana
- Comfortable with agile methodologies like scrum, git flows and paired/extreme programming
- Able to take high-level requirements and break them into smaller, more manageable tasks
- Able to prepare software/hardware quality control documentation, with a relentless attention to detail
- Familiar with consolidating strategic supplier and manufacturing partnerships for the successful scaling of a project
- Able to empathize and communicate with technical and non-technical stakeholders (e.g., clients, users, C-level executives and investors) to champion their needs, share their knowledge, translate their requirements and manage their expectations
- Proficient with test-based development (TDD) and continuous integration/delivery (CI/CD) scripting using python, bash, powershell, JUnit, UIAutomator, Gradle, CircleCI and Teamcity
- Proficient in Webhook and API integrations for automation, including conversational interfaces and IoT backends
- Proficient in Android software development (Android Studio, NDK) including custom AOSP builds.
- Proficient in the use of physical computing platforms (e.g. Arduino, Raspberry Pi) and off the shelf electronic components for the development of proof of concept prototypes and MVPs
- Experienced in digital fabrication with CAD (Thinkercad, LibreCAD) and rapid prototyping tools such as 3D printers and laser cutters
- A relentlessly user-obsessed and vocal champion of a UX-first approach to Engineering Design.
- Familiar with a wide range of technologies and frameworks. Always researching and learning the right tool for the job.
- Biased towards action and simple/elegant data-driven solutions.