Pedro Luna

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Software Engineer, IoT, IIoT & Internet of the Future enhancer & researcher.

Languages and skills

Specialized on:	LoRa, Internet of things, Industrial Internet of things, Internet of the future.
Programing languages:	Go, Python, C/C++, Java, C#, JS
Frameworks and supersets:	Arduino, .NET, Vue, Angular, Node-JS, Typescript
Interpreters and CLI:	AWScli, Bash, windows Script, HTML, CSS, PowerShell, Cisco IOS.
Technical Skills:	Software develop, Shell scripting, Linux and windows administration, Operating Systems hardening, IT corrective and preventive maintenance, IT Support and administration.

Languages:

English	TOEFL (score:557)
German	A2
Spanish	Native

Relevant Projects

03-2020	Personal project/ Universidad Panamericana Fire Monitor: Application written in Go. Given a specific device, it consumes its lectures from TTN (The Things Network) and displays them on a dashboard. If the temperature rises above a threshold, the application sends a notification via email. In the application, is a button to calculate the latitude and longitude of the device. There is another button to display that position on a map. The coordinates are calculated using the Semtech's GLS service and TTN metadata (RSSI, SNR and gateway's coordinates).More details at http://www.pedrogoiot.com/firemonitor
01-2020	Semtech corporation Wifi Analyzer for geolocation: wrote in Python, this application creates a PDF and an XLXS file with information related to the performance of different geolocation APIs. The excel file contains the results from API requests as well as the distance and direction calculated using data from the API against the actual position. The PDF displays comparative plots to analyze the performance of geolocation providers. Collaboration with the France and UK team.

01-2019	Semtech corporation
	LoRa Network Server deploy, operation and maintenance: Originally, all instances of this type, were deployed and operated by the European team, I've worked with the swiss team of R&D to transfer the operation to MX. This kind of server manages LoRa devices, LoRa Gateways, data and applications. I had deployed the instance using AWS and was responsible of grant access, credentials, provision, reconfigure and deprovision devices and Gateways for the *Semtech's Smart Building reference Kit* and *Smart Asset Tracking*. I also brought support to multinational teams, as India, China and USA.
08-2019	Semtech corporation
	SBK-lite Demo: wrote using Angular, this application is a simplified version of the original *Semtech's Smart building reference kit*. Displays in a dashboard the data taken from LoRa devices.
11-2018	Universidad Panamericana. Aguascalientes, México.
	Deploy of LoRaWAN campus network: Infrastructure installation, configuration of middleware (Kerlink Solution with *embedded linux OS*), end devices programming (*Microchip* Explorer boards.) integration of the LoRaWAN GW's within the campus data network and the TTN server, display data on a website Dashboard, QoS site survey of the LoRa WAN Network (using Multitech solution).
08-2018	INFOTEC Aguascalientes, México.
	Consultant services for private industry writing technical documentation required to reach government funding for Industrial Internet of things solutions. The topics for these projects are: Agriculture, IIoT and retail. Responsible of: -Feasibility studies. -Planning (scope, definition, tasks, schedule, costs, staff, communications and risks). –Solution Design, diagrams, and technical details of the IoT solutions. -Quote technical aspects of the projects. -Integration of the proposals.
05-2018	INFOTEC Aguascalientes, México.
	Automatic Guided Vehicles route manager: Develop of Backend and frontend application which allows to draw routes on a facility layout. -Research and development of electronic system for automated vehicles. -Requirement surveys. – Solution design and architecture. -Data Base design and deployment. -Develop of Backend on .Net. – Develop of UI on Angular. -Communication between backend and frontend using data serialization mechanisms. - Develop of the route downloader to the vehicle.
01-2017	INFOTEC Aguascalientes, México.
	Mobile IoT stations for environmental monitoring Consists on a drone made from scratch in order to maximize flight time, it was equipped with a *gas sensor mote* that performed pollution measurements and mapped them. -Solution architecture. -Research, development, construction and programming of the drone. -Assembly and programming of the *gas sensor mote*. -Configuration and hardening of the middleware *OS (embedded Linux)*. -Installation and configuration of ICT. -Context broker configuration. -Backend development for end user App (.Net). -Frontend development for end user App (Angular)

09-2017	Smartapp Aguascalientes. México.
	Automation of the process of VIN writing in RFID tags on E1 motor line of Nissan's A1 plant. Consist on a software that download the daily production plan, storages the information on a local database and write the corresponding information to the RFID tag in order to begin the engine assembly process. -Solution design. -Development team leader.
02-2017	Smartapp Aguascalientes. México.
	Robotic Vision for quality inspection in E1 and E3 motor lines of Nissan A1 plant. System consisting of two robotic arms with cameras at their ends, each robot takes a sequence of photographs in different areas of interest, then the pictures are analyzed by a computer vision system that determines the absence or presence of parts needed to comply the specifications of the analyzed model. Participation: -Feasibility study. -Planning (scope, tasks). -Design, diagrams, and technical details of the computer vision system. -Integration of proposal. -Integration of Data Base, network services, cameras, vision system, interface, PLC systems and robot control systems. -Develop of Data collections for the computer vision systems. -Develop of a user interface to visualize Computer vision results, start, stop and pause the robotic systems and manage the Data collections for each specification of their motors.
08-2017	Smartapp Aguascalientes. México.
	Consultancy services for Nissan CIVAC plant Design of an IIoT traceability platform, which consists on collecting relevant data from automated tools wirelessly, for processing and fulfill traceability and quality control requirements. -Feasibility study. -Solution architecture.

Professional experience

Dec 2018 – Feb 2020	Semtech, Aguascalientes, México.
	Software engineer. LoRa Cloud Services
	    -Application Developer.
	    -Service validation, monitoring, escalation and end user support.

Dec 2016 – Dec 2018	INFOTEC, Aguascalientes, México.
	Consultant/ Software engineer. Embedded systems laboratory
	    -Application Developer.
	    -Research / investigation on: IoT end user solutions, development & ICT.
	    -End user and enterprise consultant.

Jan 2017 – Mar 2018	Smartapp, Aguascalientes, México.
	Cofounder / Software engineer.
	    -Application developer.
	    -Operational strategy and execution.

Nov 2012 – Jul 2017	Universidad Panamericana Aguascalientes, México.
	CISO (Chief Information Security Officer) Information Technologies
	    -Identify, avoid, minimize or mitigate the risks related to IT.
	    -Define a DRP that fulfills the enterprise business continuity plan.
	    -Develop and deploy solutions and policies within campus Aguascalientes.

Feb 2012 – Jun 2013   Universidad Panamericana Aguascalientes, México.
Lecturer Faculty of Engineering

-Introduction to programming. -C / C ++. -Artificial Agents -Virtual Agents on virtual environments programming -Operating systems.

Education

2016   Universidad Panamericana Aguascalientes, México.

Major on Philosophical anthropology.

2012   Universidad Panamericana Aguascalientes, México.

Master on Science

2009   Universidad Panamericana Ciudad de México.

Major on Project Management.

2008   Universidad Panamericana Aguascalientes, México.

Bachelor on computer Science