VICTOR SOTO

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HIGHLIGHTS

- MASc. in Electrical and Computer Engineering from University of Ottawa
- **Software Engineer** with experience in **Cloud Infrastructure**.
- Strong knowledge of **Linux** based systems, **Java, Python** and **Rust.**
- 2+ years as part of the **Create Transit Network/NSERC** program
- In-depth knowledge of **Communication Protocols** for **Vehicular Edge Computing** systems and **Vehicular Networks**
- Designed and developed application components in an Agile/Scrum environment
- Working knowledge of **OOD/OOP, Data Structures, Algorithms** and **Computer Networks**
- Excellent problem-solving, troubleshooting, and debugging skills
- Outstanding writing skills, adaptable to changing priorities, and a team player.

SKILL SET

- **Programming Languages:** Java, Python, C/C++, Rust
- **Operating System:** Linux, Windows
- **Cloud platforms:** Microsoft Azure
- **Automation/Build** Kubernetes, Docker, Terraform, Azure DevOps
- **Version Control Tools:** Git
- **Network Protocols:** TCP/IP, UDP, HTTPS, VoIP, SIP, MSRP, WebRTC
- **Network Management:** Wireshark
- **Virtualization Technologies:** Oracle Virtual Box, VMware, Hyper-V
- **Web/Front End Libraries:** HTML, CSS, JavaScript
- **SDLC:** Agile, Scrum
- **DAST Tools**: Burpsuite
- **SAST Tools**: Fortify
- **Other:** GStreamer

EDUCATION

- **MASc. Electrical and Computer Engineering**

  University of Ottawa, Canada 2016-2018

  Relevant courses: Distributed Systems Engineering, Resource Management on Distributed Systems, Intelligent Transportation Systems, Discrete-event Modeling & Simulation

  Thesis: "*Mobility-Oriented Data Retrieval Protocol for Vehicular Edge Computing*" (http://hdl.handle.net/10393/38836)

- **BASc. Electronics and Telecommunications Engineering**

  University of Guadalajara, Mexico 2009-2013

  Relevant courses: Computer Networks, Protocols & Standards, High-frequency Electronics, Semiconductor Theory, Antennas, Digital Systems, Audio & Video Systems

  Thesis: "*Design and Implementation of a 2.45GHz Wearable Antenna*"

PROFESSIONAL EXPERIENCE

- **SOFTWARE ENGINEER, Motorola Solutions**
  Gatineau, QC Jun 2019 – Current

  Technologies: Microsoft Azure, Kubernetes, Azure Devops, Docker, Terraform, Linux, Java, SIP, GStreamer, Kurento Media Server, WebRTC, Rust
  - Researched, designed, and developed an Emergency Call Handling Suite.
  - Integration of end to end elements (front-end and back-end)
  - Proficient in multiple programming languages, frameworks, domains, and tools such as: Rust, Java, Quarkus Framework, JSON, REST, API.
  - Built cloud infrastructure using Infrastructure as Code/Automation tools such as: Microsoft Azure/Azure DevOps, Kubernetes, Docker, Terraform.
  - Setup full CI/CD pipelines so that each commit a developer makes will go through standard process of software life cycle and gets tested well enough before it can make it to the production.

- **RESEARCH ASSISTANT, PARADISE LAB, University of Ottawa**
  Ottawa, ON Jul 2016 – Dec 2018

  Technologies: Linux, Python, C/C++, OMNET++, SUMO, VEINS Framework, HTML, gcc, g++
  - Researched, designed, and developed a collection of communication and routing protocols for vehicular networks (V2V, V2I, V2X) as part of the NSERC DIVA Strategic Research Network and NSERC CREATE TRANSIT Program.
  - Implemented parsing algorithms for Data Analysis using Python Data Sciences libraries.

  Publications:
  - V. Soto, R. E. De Grande, and A. Boukerche, "Repro: Time-constrained data retrieval for edge offloading in vehicular clouds" in Proceedings of the 14th ACM Symposium on Performance Evaluation of Wireless Ad-Hoc, Sensor, & Ubiquitous Networks, 2017. (https://dl.acm.org/citation.cfm?id=3134834)
  - A. Boukerche and V. Soto, "An Efficient Mobility-Oriented Retrieval Protocol for Computation Offloading in Vehicular Edge Multi-Access Network", IEEE Transactions on Intelligent Transportation Systems, 2020. (https://ieeexplore.ieee.org/document/9091944)
  - A. Boukerche and V. Soto, "Computation Offloading and Retrieval for Vehicular Edge Computing: Algorithms, Models, and Classification", ACM Computing Surveys, 2020. (https://dl.acm.org/doi/10.1145/3392064)

- **TEACHING ASSISTANT, University of Ottawa**
  Ottawa, ON Jan 2017 – Dec 2017

  Technologies: MATLAB, Python, Arduino, Raspberry Pi
  Electrical Engineering Design Project: Part I & II
  - Conducted Practical Labs for both subjects.
  - Assisted and guided students through the design, development and testing of an innovative electrical design project.
  - Provided support on creating a business model and filling a patent application.
  - Evaluated students and provided feedback on technical issues and writing skills.