

José Manuel REYES

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Nationality: Guatemalan

Education

- 2010 MSc in Computer Networks and Information Security (Cum Laude, GPA: 86%), Galileo University, Guatemala
- 2007 BAC in Systems, Informatics and Computer Science Engineering (GPA: 84%), Galileo University, Guatemala

Languages

Spanish Native Language
English Professional Proficiency
French Basic knowledge

Work Experience

- 2020- *Full-Stack Developer*, [Hilti](#), Paris, France
- Currently building tools and data pipelines to enhance strategic digital marketing decisions
Python, BigQuery, RedShift, AWS, SQL
- 2018–2019 *Research And Development Engineer*, [RS2M Department @ TELECOM SudParis](#), Evry, France
- Implemented a framework to identify the operational data-paths in Software Defined Networking (SDN) driven data plane. Given framework is based on distributed test case generation and monitoring. Five different tools (or modules) were developed, those are: (i) the extraction tool - a network packet sniffer written in Go and based on [GoPacket](#) library, which is installed at all network interfaces of the data-plane forwarding devices, that forwards the traffic to the analyzer tool, (ii) the packet generation tool - a raw packet generator also written in Go, which is installed at all hosts in the data-plane, that generates packets with specific headers (in the widespread [pcap-filter](#) syntax), (iii) the analyzer tool - a tool installed at the processing server that receives the packets, filters the packets having the same UID and computes the flow trees from the set of observations, (iv) the orchestration tool - receives the traffic of interest to generate, requests the packet generation tool to send a network packet with the requested headers using a specific UID, and finally (v) the User Interface(UI) tool - a web interface for discovering the data-paths that receives the interesting traffic to discover from the user and reports the resulting data-paths. *Go, Python, Bash, MongoDB, Docker, SDN Controller*

2016–2018 *Senior Software Engineer, Smartmatic, Panama City, Panama*

- Improved processing performance of an image recognition application, tuning DB queries, indices and memory management in both application containers and database, being able to process and serve 2k images/m. *Java, Oracle, Docker, Grafana, Linux*
- Designed and developed features for the US Election Management System which prepares the electoral data and configuration files for voting devices, following the FIPS (Federal Information Processing Standards) standards for key generation, storage, distribution and digital signatures. *Java, Oracle, Docker, AngularJS*

2012–2016 *Software Engineer, Smartmatic, Panama City, Panama*

- Developed a votes consolidation and canvassing system for the [Philippines 2016 General Election](#) that expected votes from 92,509 vote counting machines and 55 million voters, deployed in 1,739 canvassing centers. *Java, Oracle, MySQL, AngularJS*
- Re-Developed application that posts election results on the web in near real-time, by synchronizing the generated results with Amazon EC2, resulting in a performance optimization of nearly 15 times. *Java, Bash, AWS*
- Conducted source code review with technical committees of political parties and election watchers.
- Re-factored Java Swing application that generates data and configuration files for voting machines used by 3 million voters in 2014 [Belgian elections](#) deployed in 3224 polling places, including extension for the support of ECC (Elliptic Curve Cryptography) for encryption and digital signatures.

2009–2012 *Web Developer, Fox International Channels, Guatemala, Guatemala*

- Implemented global publishing platform focused on creating and maintaining TV Channel's Websites and TV Shows, helping to reduce custom setup and maintenance costs up to 40%. *C#, .NET, SQL Server, Umbraco*
- Improved existing websites performance by integrating content distribution networks and compression/caching mechanisms, resulting in nearly 20 times (2.5s page load) speed improvement. *C#, .NET, SQL Server, Windows Server*

Publications

2019

- **José Reyes, Jorge López, Natalia Kushik, Djamal Zeghlache:** “[On the Assessment and Debugging of QoE in SDN \(work-in-progress paper\)](#)” *In Proceedings of the 18th IEEE International Symposium on Network Computing and Applications (NCA 2019)*, Cambridge, MA, USA, Sept. 2019
- **José Reyes, Jorge López, Djamal Zeghlache:** “[Identifying Running Data-paths in Software Defined Networking Driven Data-planes](#)” *In Proceedings of the 18th IEEE International Symposium on Network Computing and Applications (NCA 2019)*, Cambridge, MA, USA, Sept. 2019