

Gabriel DÁVILA REVELO

Media Solution Architect



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📍 Bauness 2193, Buenos Aires, Argentina
📅 Born Date : 14/05/1987 - Quito, Ecuador

Telecommunications Engineer with about ten years of experience on media broadcast technologies and data network engineering. I'm a highly motivated person to learn and explore. My main interests are related with new data communications protocols (TCP/IP) and services oriented to Video and Media.

Currently, I work as Media Solution Architect with focus on video technologies such as IPTV and OTT services so I've developed a strong knowledge on encoding, video delivery and video quality assessment techniques. As Solution Architect, I also have a deep understanding of cutting-edge infrastructure tools such as virtualization, cloud computing and containerization (Docker and Kubernetes).

I've also collaborated in academic research with interest in QoS Measurements over data networks. In this way I have strong programming skills on typical development tools such as C/C++, Python, Data Bases and R.

🎓 EDUCATION

- 2014 **MSc in Telecommunication Engineering**, Buenos Aires University
Thesis : "Impact of MPLS tunnels on Internet Topology"
- 2012 Postgraduate Specialization in Telecommunication Networks and Services, Buenos Aires University
- 2009 **BSc in Electronic and Telecommunications Engineering**, Army Polytechnic School, Quito - Ecuador

💼 EXPERIENCE

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|------------------------------------|--|
| Present
Dec 2018 | Media Solution Architect, GRUPO TELECOM CABLEVISIÓN, Buenos Aires - Argentina <ul style="list-style-type: none">➤ Architecture definitions for video and media technologies such as IPTV and ABR video services, specifically by focusing on mid and long term evolution➤ Migration of video headends to full cloud based datacenters by keeping in mind new microservices architectures within containerized frameworks such as Docker/Kubernetes/Openshift➤ New video technologies and architectures :<ul style="list-style-type: none">➤ Quality of Experience and visual quality assesment techniques (VMAF, MOS, non-reference video metrics)➤ Encoding (AVC, HEVC, AV1)➤ Packaging (DASH, HLS, CMAF)➤ Low latency arquitechtures➤ ABR optimization : Video Players, CDN issues, ABR algorithms, bitrate efficiency <div>OTT IPTV CDN FFmpeg VMAF MPEG-TS QoS/E Docker Kubernetes Linux Python C++ javascript</div> |
| Dec 2018
Sep 2016 | Access Network Engineer, GRUPO TELECOM CABLEVISIÓN, Buenos Aires - Argentina <ul style="list-style-type: none">➤ Analysis of the impact of new services over access networks technologies such as Docsis 3.0, Docsis 3.1, xDSL and GPON➤ Definitions of best practices for access and home network monitoring by taking into account the QoS issues on services such as IPTV, VoIP and OTT <div>Docsis GPON IPTV OTT QAM QoS SNPM Python</div> |
| Dec 2018
Jan 2014 | Research Assistant, CoNexDat Lab FACULTAD DE INGENIERÍA - UBA, Buenos Aires - Argentina <ul style="list-style-type: none">➤ Research of Internet Measurements and Internet Topology➤ Improvements and adaptation of open source tools for Internet Meassurements➤ Scripting for automation measurements over large scale and distributed networks <div>Networking TCP/IP QoS CAIDA scamper tracebox Python R C++ Linux SQL</div> |
| Jul 2016
Dec 2014 | Presales Engineer, XN, Buenos Aires, Argentina <ul style="list-style-type: none">➤ Product management for IoT and smart cities solutions.➤ Design, evaluation and quotation of telecommunications infrastructure : wireless access networks, p2p RF links, enterprise solutions and video surveillance systems.➤ Preparation and presentation of technical offers in response to customers requirements. <div>IoT Networking Wireless CCTV LoRa ZigBee</div> |

Dec 2014 Jun 2011	Technical Consultant, ARGENTINA CONECTADA PROJECT, Buenos Aires - Argentina <i>Argentina Conectada</i> was a Government Project under the umbrella of the former <i>Ministerio de Planificación</i> oriented to define the technical strategy to improve the coverage and the access to Internet. <ul style="list-style-type: none"> › Technical advising for the deployment of a wide country data network › Technical feasibility analysis and high level design over networking technologies such as : <ul style="list-style-type: none"> › DWDM transport network (backbone) › IP/MPLS networks (backbone and aggregation) › FTTH's terrestrial access technologies (access) <div>DWDM IP/MPLS FTTH Fiber Optics</div>
Aug 2010 Dec 2009	Support Engineer, DESCA, Quito - Ecuador <ul style="list-style-type: none"> › Networking Troubleshooting (Switching and Routing) › Configuring and Installation of Carrier Class Networking equipment › LAN network design and configuration › Firewall and network monitoring tools management <div>CCNA Cisco Routing Switching Networking Firewall</div>
Aug 2010 Dec 2009	Summer trainee, GLOBAL CROSSING, Quito - Ecuador Training and Internship in the Customer Engineering department of the former Global Crossing Company (Currently Level 3) <div>Routing IP protocols Networking</div>

SKILLS

Protocols	TCP/IP, DASH, HLS, HTTP/S, AVC, HEVC, MPEG-TS
Programming	Python, C/C++, Javascript, R
Infrastructure	Linux, Kubernetes, VMWare, AWS
DevOps	Docker, git, visual studio
Open Source Tools	FFmpeg, VMAF, DASH-IF, TSduck

LANGUAGES

Spanish	● ● ● ● ●
English	● ● ● ● ○
French	● ● ● ○ ○

STRENGTHS

- › Passionate learner
- › Autonomous
- › Problem solver

OPEN SOURCE PROJECTS

EASYVMAF

2020 - CURRENT

 github.com/gdavila/easyVmaf

Python tool based on ffmpeg and fprobe to deal with the video preprocessing required for VMAF computation. It allows to do automatically deinterlacing, Upscaling/downscaling, Frame-to-Frame Syncing, Frame rate adaptation

FFmpeg VMAF Python Docker

PyDocsisMON

2018 - 2019

 github.com/gdavila/pyDocsisMon

PyDocsisMon is a set of basic functions and definitions to work in straightforward manner with Docsis attributes through SNMP. The main goal is to make an abstraction of the SNMP complexity to focus only on Docsis attributes

Docsis SNMP PySNMP

COMPLEXNETS++

2012 - 2013

 github.com/CoNexDat/complexnets

This toolbox provides different tools to analyze complex networks, i.e., networks issues from complex systems or any graph in general

C++

PUBLICATIONS

- | | |
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| 2016 | Unveiling the MPLS Structure on Internet Topology
G. Dávila Revelo, M. Anderson Ricci, B. Donnet, and J. I. Alvarez-Hamelin. In Proc. 8th International Workshop on Traffic Monitoring and Analysis (TMA). Louvain-la-Neuve, Belgium |
| 2016 | Towards an Improved Internet Topology Model
G. Dávila Revelo, Poster Session presented at 6th PhD School on Traffic Monitoring and Analysis (TMA), April 2016, Louvain-la-Neuve, Belgium |