

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 strong 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 Measurements➤ 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) › FTTX '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

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 |