Mauricio
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Software Engineer
Kinvolk

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📍 Medellín - Colombia

ℹ Aug 31, 1991

Skills ────────────

Programming Languages

C	●●●●●
C++	●●●●○
Go	●●●●○
Python	●●●○○
Java	●●○○○

Computer Networks

eBPF and XDP	●●●●●
TCP/IP	●●●●○
SDN and NFV	●●●●○

Virtualization

KVM/QEMU	●●●●○
Open vSwitch	●●●○○
Docker & LXC	●●●●○
Kubernetes	●●●○○
OpenStack	●●○○○

Software Development

Git	●●●●○
Open Source	●●●●○
GDB	●●●○○

Languages ──────────

Spanish	●●●●●
Italian	●●●●○
English	●●●●○

Soft Skills ─────────

Problem Solving	●●●●●
Self-Motivation	●●●●○
Communication	●●●●○
Teamwork	●●●●○

Profile

Young software engineer with 3+ years of experience in software development. I am a proactive team member, very motivated and enthusiast about new life challenges. I work as a software engineer at Kinvolk. I have experience in open source development, I have contributed to different projects like Linux kernel, BPF Compiler Collection (BCC), Open vSwitch (OVS), Data Plane Development Kit (DPDK).

Experience

Jul 2019 – Present — **Software Engineer** — *Kinvolk*
- Contributing to OpenTelemetry, a distributed tracing framework.
- Contributing to Lokomotive, the Kinvolk's Kubernetes distribution.

Feb 2016 – Jul 2019 — **Research Assistant** — *Polytechnic University of Turin*
- Developing of Polycube, an open source framework to build fast and lightweight virtual network functions with eBPF.
- Developing of high-performance virtual network functions with eBPF and XDP.
- Contributing to open source projects like Linux kernel and BCC.

Feb 2017 – May 2017 — **Consultant** — *Nebbiolo Technologies*
- Implementing high performant virtual network functions with eBPF.

Sep 2016 – Jan 2017 — **Consultant** — *Plumgrid (Acquired by VMware)*
- Developing iovisor-ovn, an eBPF datapath for Open Virtual Networking (OVN).

Jan 2016 – Aug 2016 — **Research Assistant** — *Polytechnic University of Turin*
- Developing of a high-performance communication channel for inter-VM communication in Open vSwitch.
- Contributing to open source projects like Open vSwitch (OvS) and Data Plane Development Kit (DPDK).

Education

2013 – 2015 — Master in Computer Engineering — *Polytechnic University of Turin*
2009 – 2013 — Bachelor in Electronic Engineering — *University of Antioquia*

Projects

Polycube — github.com/polycube-network/polycube
Polycube is an open source framework for developing fast and lightweight network functions using eBPF and XDP.

IOVisor-ovn — github.com/iovisor/iovisor-ovn
IOVisor-ovn is an eBPF based datapath for the Open Virtual Networking project. It provides a virtual networking solution for virtual machines in environments like Open Stack.

Squadra Corse Polito — facebook.com/pg/SCPolito
Squadra Corse is a student racing team that each year designs, builds and tests an electric car. I was in charge of developing the telemetry and data-logging systems.

Publications

Jun 2018 — **Creating Complex Network Services with eBPF: Experience and Lessons Learned**
HSPR

Oct 2018 — **Transparent Optimization of Inter-Virtual Network Function Communication in Open vSwitch**
CloudNet

Aug 2016 — **A Transparent Highway for inter-Virtual Network Function Communication with Open vSwitch**
SIGCOMM