# Volodymyr Huti

# **Profile**

A self-motivated and dedicated software engineer who is passionate about analyzing and solving problems with a background in computer networking. I'm experienced in developing and debugging networking solutions for residential/enterprise gateways. My main areas of interest include low-level development, Linux kernel and it's networking subsystem, and fintech - automation of investing/trading operations. Currently developing a Linux Switchdev driver for the ASIC vendor.

## **Technical Skills**

**Programming Languages:** 

C/C++ STL, socket programming, C++98/11/14, POSIX API, OOP

Computer Science Algorithms, data structures, computer networking

Networking L2/L3 - strong knowledge of switching, routing and associated protocols

L4 - hands-on experience with common protocols like DHCP/DNS/HTTP/... as well, usage/configuration/debugging of associated services/applications

Network offloading to ASICs using Switchdev/SONiC models Hands-on experience with FIB offloading implementation

Linux Kernel Well aware of kernel subsystems, common interfaces, and mechanisms

Hands-on experience with development of Switchdev drivers

Skilled in the kernel research, analysis, debugging and troubleshooting

Versed in the networking implementation, especially routing and neighboring

Debugging Userspace: GDB, Valgrind, PDB, Wireshark, Linux tools ecosystem ...

**Kernelspace:** Ftrace and associated interfaces, GDB, objdump, kasan  $\dots$ 

Virtualization Traffic generators: Ixia, scapy, Network simulators: GNS3

Scripting Bash scripting, process/test automation, Linux system administration

General Vim, Git, Docker, GNU Make/Autotools, basic IATFX/Python/frontend stack

#### Soft Skills

Languages: Ukrainian (native), English (Upper-Intermediate), Russian (Professional working proficiency) Detail-oriented, self-starter with a strong sense of ownership Deep analytical, problem-solving, debugging and troubleshooting skills Strong communication and teamwork skills

## Experience

Plvision Oct. 2019 - Present

Software Engineer Lviv

Took part in the development of Switchdev driver for the ASIC vendor

- Implemented FIB offloading, both userspace driver and firmware sides
- Performed further stabilization/maintenance/troubleshooting/optimization
- Cooperated with architects during features design
- Cooperated with Q&A team durion test design

Performed validation/fixing of 40+ IPv4 tests and developed some by myself

- Helped with debugging of the newly found kernel bugs
- Did research and analysis of Linux behavior for uncommon configurations and corner cases
- Developed a practical part of the SONiC NOS rump-up course for the new engineers Took part as a mentor during the initial training sessions

Global Logic Feb. 2018 - Oct. 2019

C Developer Lviv

Worked on two projects developing gateway middleware for multiple European customers. Responsibilities included:

- Was responsible for troubleshooting middleware issues

  Has resolved over 100 issue tickets, including crash fixes, resource leakage, wrong configuration ...
- Took part in the driver porting and further troubleshooting Ported multiple utilities and demons from other projects
- Cooperated with foreign teams for debugging complex driver/middleware issues
- Did debugging of complex stability bugs
- As part of another project ported about 20% of GUI from one gateway to another Designed, implemented and extended middleware functionality for the new GUI Fixed emerging issues and crashes afterward Implemented new GUI elements, like the WiFi extenders state display

### Education

National University Lviv Polytechnic Bachelor of Science Degree in Computer Engineering

Lviv

2016 - 2020