Dmitry Zhadinets

SUMMARY OF QUALIFICATIONS:

I have more than 20 years of experience in Information Technologies with a focus on embedded development and systems analysis, management and production support. Effectively combine solid technical, analytical, and project management skills. Participated in all phases of the embedded project life-cycle from solution development, HW/FW/BSP bring-up, functional implementation, onsite and remote solution deployment, standards support, users training; till post-production activities. I successfully use different styles of programming, such as object-oriented, functional, procedural programming etc. Programming is basically oriented on cross platform development. Main programming languages are: C/C++, Python, Bash
Gitlab https://gitlab.com/users/dzhadinets/projects
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PROFESSIONAL EXPERIENCE:

Client: Rockwell Automation

Cleveland, IHIO – hybrid
2024 - present
Senior Embedded Engineer
Design and development of C++ based Firmware for system of automation for various platforms and architectures.
Technologies: C/C++ /Embedded C++, QNX, Python, VxWorks, RTOS, Industrial Safety, Linux Kernel, Docker, WSL, jenkins, gitlab

Client: READTYCH

Houston, Texas – onsite
2024 – present
CTO, Senior Embedded Engineer
READTYCH began with the aim of bridging technology and education by developing the world's first patented dual-screen foldable E-Tablet. The platform is a unique network and marketplace for educational apps. It transforms how students learn, engage, and grow. https://readtych.com/
I developed the device completely from scratch. Led hardware, software and backend development. Did myself firmware. Bootloader, including DDR memory configuration. Linux kernel development, all peripheral drivers especially for E-Paper Display Controllers. BSP development, based on YOCTO. Graphics layer utilising DRI video subsystem and custom Wayland compositor. Security and OTA on the device and in the cloud.
Technologies: Embedded Software Programming, I2C, Software Architecture, Application Architecture, System Architects, Amazon Web Services (AWS), Computer Science, Kernel, Service Provider Interface (SPI), C, C++, Embedded Devices, Electronic Engineering, Electronics Hardware Design, Embedded Software, Python, AOSP, Firmware, Bootloader, Debugging, U-Boot, RTOS, NXP, E-Ink, Time Management, Resource Management

Client: Amazon

Portland, Oregon - remote
2022 - 2024
Solution Architect, Senior Firmware developer
The goal of the project is to implement a media streaming solution with signal analysis based on Deep Learning approach. Using OpenCV, OpenML, Pytorch, Yolov5. With deep integration with AWS cloud based on AWS GreenGrass Approach. It must be hardware agnostic (means can be launched on different types of FW) without any source changes
Technologies: Yocto, Embedded Software Programming, SPI, I2C, UAR, CSI, Software Architecture, Test Driven Development, Device Drivers, Amazon Web Services (AWS), Computer Science, Kernel, C, C++, Python, PyTorch, Yolov5, OpenEmbedded, nvidia

Client: Verifone POS

Chicago, Illinois - remote
2020 - 2022
Solution Architect, Senior Embedded developer, Team lead
Build and support a wide range of Verifone Point of Sale devices (Linux and Android). mplementation of security module (HSM) support for payment verification. Secure boot using trust zone, OTA (FOTA and SOTA)
Technologies: Embedded Software Development, AOSP, BSP, board bring-up, Drivers development, Hypervisor, Device Tree, I2C, SPI, UART, Linux Kernel, Linux, Embedded C++, C++, C, C/C++ STL, meson, cmake

Client: Verizon

Basking Ridge, New Jersey – hybrid
2018 - 2020
Solution architect, Senior Firmware Developer. Team lead
Design and development of digital signature streaming solution. Qualcomm Snapdragon 820 board bring-up with Android 6. LTE network extension development. SDK development for 3rd party developers
Technologies: Embedded Software Development, AOSP, BSP, OS bringup, Drivers development, Hypervisor, Device Tree, I2C, SPI, UART, Linux Kernel, Linux, Embedded C++, C++, C, C/C++ STL, meson, cmake

Client: Arrival

Oxfordshire, UNITED KINGDOM - remote
2017 - 2023
Solution Architect, Senior Embedded developer, Team lead
Design and development several generations of automotive HMI (Human Machine Interface) with own hardware platforms (Qualcomm Snapdragon 8xx, NXP IMX8QuadMax) with Android (6-11) support and SafeRTOS for safety critical functionality, Usage of different automotive protocols: CAN, LIN,, MOST, FPD-Link, GMSL, J1939, etc. Taking into account ISO26262, AUTOSAR standards
Technologies: Embedded Software Development, AOSP, BSP, OS bringup, Drivers development, Hypervisor, Device Tree, I2C, SPI, UART, Linux Kernel, Linux, Embedded C++, C++, C, C/C++ STL, meson, cmake

Client: Paxton

Brighton, UNITED KINGDOM – hybrid
2014 - 2017
Solution Architect, Senior Embedded developer, Team lead
Design and development the functionality for ARM based (imx6) platform aimed to record multimedia streams from IPTV cameras. The system should record only in case when motion is detected. The system should provide a web based API for the browser UI. The system should not use any browser plugins (webrtc + html5)
https://www.paxton-access.com/us/products/paxton10-server/
Technologies: gstreamer, webrtc, h254, vp9, g711, Embedded Software Development, BSP, OS bringup, Drivers development, Hypervisor, Device Tree, I2C, SPI, UART, Linux Kernel, Linux, Embedded C++, C++, C, C/C++ STL, meson, cmake

Client: Harbortouch POS

Allentown, Pennsylvania – hybrid
2013 - 2015
Senior Embedded developer, Team lead
Develop Android OS v6, v7 , v8 for the custom IMX6 based device. Adopt all layers of the system to boot and launch on the device. Implement PKI based protocol of communication with payment module
https://www.harbortouchs.com/
Technologies: Embedded Software Development, AOSP, BSP, OS bringup, Drivers development, Hypervisor, Device Tree, I2C, SPI, UART, Linux Kernel, Linux, Embedded C++, C++, C, C/C++ STL, meson, cmake

Client: SanDisk

Milpitas, California – hybrid
2010 - 2013
Senior Firmware Engineer
Design and development of the firmware for solid drives Gen6/7 eMMC, SSD. In particular binary cache and secure erase functionality. Including continuous integration implementation (deployment, unit testing and reports). Design and development embedded flash memory specific features like: SecureErase/Trim.
Technologies: C/C++, Python, CI/CD, Test driven development, firmware, flash memory, Jedec

Client: Forex

Minsk, Belarus – onsite
2008 - 2010
Solution architect, Senior C/C++ Developer
The system to detect trade spikes and prevent processing of it. It is a technical study that is used in identifying sudden price jumps or spike bars on the activity chart. Such price spikes are usually seen at the end of a trend or on price breakouts. My responsibility was to design and develop the approach and integrate it into Forex trading solution (Metatrader 4)
Technologies: Software Architecture · Application Architecture · C++ · C/C++ STL · Training · MetaTrader · RESTful WebServices · REST APIs · Big Data Analytics, ReactJS, AJAX, Angular, CSS, HTML

Client: Open source

Over the world - remote
2007 – present
Handyman
Linux kernel Yet Another Linux Development Approach
https://gitlab.com/dzhadinets/yalda
GStreamer I was involved in the development of OpenWebRTC project and took part in the development webrtc element of the mainline of gstreamer. And has fixed several issues in the motioncells element.
https://gstreamer.freedesktop.org/releases/1.14/**Technologies:**
Technologies: Everything in this world

Client: Academy of science of the Republic of Belarus

Minsk, Belarus – onsite
2002 - 2007
Solution architect, Senior C/C++ Developer. Scientist
Project purpose is to create a multi-voices and multilingual system of conversion “text to voice” and “voice to text” (languages: Russian, Belorussian, Polish). I’ve developed the whole system from scratch. Including scientific research in the sphere of NLP and algorithms of prosodic modifications of the speech. It was the subject of my thesis for PhD https://cordis.europa.eu/project/id/INTAS2004-77-7404/fr
Technologies: C/C++, Python, CI/CD, Test driven development

EDUCATION

United Institute of Informatics Problems, Minsk - Master of science degree in computer engineering
OCTOBER 2004 - AUGUST 2007
System analysis, control and information processing department. Speech technologies. The subject of the thesis is "Algorithms of analysis and synthesis of prosodic characteristics of speech"

Belarusian State University Of Informatics And Radio-electronics, Minsk - Bachelor of Engineering degree
SEPTEMBER 1999 - JUNE 2004
Academic department of Intelligent Information Technologies at Faculty of Information Technologies and Control. Specialization is Artificial Intelligence