

# Roman K.

## Senior Software Developer

### SUMMARY

An adept software engineer with a Master's in Informational Technologies emphasizing embedded systems and cross-platform development. Extensive experience utilizing C++, Microsoft Visual Studio, Windows SDK, and various protocols (TCP/IP, HTTP, SNMP, IPP, USB). A proven track record of deploying innovations like AI-driven tools and robust driver installation systems, leading to significant improvements in performance metrics. Armed with technical mastery over development environments, frameworks, and a keen understanding of the software development lifecycle, this engineer excels in creating solutions that enhance user experience and operational efficiency.

### TECHNICAL SKILLS

<b>Main Technical Skills</b>	C/C++/C# (5 yr.), Winforms (3 yr.), Robot Framework, TCP/IP (2 yr.)
<b>Programming Languages</b>	Python
<b>C++ Libraries and Tools</b>	C/C++/C# (5 yr.)
<b>JavaScript Frameworks</b>	Express, Node.js, React
<b>JavaScript Libraries and Tools</b>	p5.js
<b>Python Libraries and Tools</b>	Robot Framework
<b>Security</b>	GPO (Group Policy Object)
<b>Databases &amp; Management Systems / ORM</b>	MongoDB
<b>Azure Cloud Services</b>	Azure Arm templates
<b>Deployment, CI/CD &amp; Administration</b>	Azure Arm templates
<b>Third Party Tools / IDEs / SDK / Services</b>	GDB, Visual Studio (4 yr.)
<b>Version Control</b>	GitHub
<b>Mail / Network Protocols / Data transfer</b>	HTTP (2 yr.), TCP/IP (2 yr.), WebRTC
<b>Virtualization, Containers and Orchestration</b>	KVM (for Kernel-based Virtual Machine)
<b>Operating Systems</b>	Linux, Windows, Windows Phone

<b>Methodologies, Paradigms and Patterns</b>	MVC
<b>Scripting and Command Line Interfaces</b>	PowerShell, Shell Scripts
<b>Platforms</b>	STM32
<b>UI/UX/Wireframing</b>	UI/UX
<b>SDK / API and Integrations</b>	Winforms (3 yr.)
<b>Other Technical Skills</b>	ACF, for Kernel-based Virtual Machine, framework, Group Policy Object, InfVerif, MERN stack (MongoDB, Express, React, Node), Spring model-view-controller

## WORK EXPERIENCE

### Gaming Software Developer, Drone Operator Simulator

**Duration:** March 2019 – May 2020

**Summary:** Developed an ASCII-based rendering engine for a drone operator simulator game, enhancing player immersion and maintaining high performance in text-based graphics.

**Responsibilities:** Created ASCII-based rendering engine, employed advanced rendering techniques, optimized drone operation mechanics, integrated complex algorithms for gameplay, built and debugged using Microsoft Visual Studio 2013.

**Technologies:** C++, Microsoft Visual Studio 2013, Rendering Techniques, Windows Console, Shell Interpreter, CLI

### Software Developer, Norton Commander Analogue

**Duration:** September 2020 – January 2022

**Summary:** Built a Norton Commander analogue file management system, improving operational efficiency with comprehensive system-level file access and streamlined file operations.

**Responsibilities:** Developed file manipulation system, leveraged Windows Kernel, utilized Shell libraries, integrated a Shell Interpreter, created advanced filtering and searching capabilities.

**Technologies:** C++, Microsoft Visual Studio, Windows SDK, Windows.lib, Shell.File.lib, Shell.dll, CLI / Windows Terminal, Windows Kernel, PowerShell

### OS Software Developer, Printer Driver .INF Installator

**Duration:** January 2022 – April 2023

**Summary:** Engineered a comprehensive, automated printer driver installation process, enhancing installation speed, accuracy, and user satisfaction.

**Responsibilities:** Developed an automated driver installation process, integrated with Windows Applications Catalog, implemented robust file encryption, and created custom GUI features.

**Technologies:** C++, Microsoft Visual Studio 2022, Windows SDK, Windows MessageDialogBox GUI, Device Stack API, PrintUI, InfVerif, UAC Control, CLI / Windows Terminal

### **Firmware Developer, Distant Remote and Control Printer System**

**Duration:** December 2023 – December 2024

**Summary:** Automated printer maintenance processes and developed a remote control system for printers, improving efficiency and client experience.

**Responsibilities:** Automated printer maintenance, enabled remote print job control, gathered printer diagnostics, and developed client-server architecture for secure data handling.

**Technologies:** C++, Windows SDK, Windows Message-based IPC, TCP/IP Architecture, SNMP Protocol, IPP Protocol, USB Protocol, Shell Interpreter, PrintUI, Custom JSON Parser

### **Full-Stack Developer, AI-Enabled Learning Path**

**Duration:** September 2024 – Present

**Summary:** Implemented a feature-rich online compiler and AI code reviewer for an AI-enabled learning platform, effectively increasing code submission efficiency and user engagement.

**Responsibilities:** Implemented online compiler, integrated AI code reviewer, introduced confidential scanning module, utilized multi-layer authentication protocols, and optimized compiler performance.

**Technologies:** C/C++, HTML, CSS, HTTPS, TCP/IP, Neural Networks, Deep Learning, Machine Learning

## **EDUCATION**

- **Master's degree in Informational Technologies of Computer Engineering**  
September 2017 - June 2023

