

# ADVANCED WINDOWS PROGRAMMING

MODERN SYSTEMS DEVELOPMENT FOR WINDOWS 11

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KERNEL



WIN32 / NATIVE API



COM • WINRT



WINDOWS APP SDK



CLOUD • AI



SECURITY



**FROM KERNEL TO CLOUD:**

MASTERING THE WINDOWS PLATFORM  
INTERNALS, APIS, AND ARCHITECTURE

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JAKE SINOFSKY

# Advanced Windows Programming

Modern Systems Development for Windows 11

Steve T. Publications

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# Modern Systems Development for Windows 11

## From Kernel to Cloud: Mastering the Windows Platform Internals, APIs, and Architecture

### About this book

The modern Windows platform is a layered, evolving ecosystem where understanding both legacy APIs and contemporary frameworks is essential for building robust, performant, and secure applications. This book provides experienced software engineers and system programmers with comprehensive mastery of the Windows development stack: from kernel-mode internals and Win32/Native APIs through COM, WinRT, and the Windows App SDK, to modern deployment, virtualization, AI integration, and cloud connectivity. Every chapter is grounded in production-quality code examples written in modern C++ (with C# where idiomatic), detailed architectural analysis, real-world design patterns, and practical guidance drawn from current Microsoft documentation and industry best practices. This is not a tutorial; it is a definitive reference for developers who need to understand how Windows works at every layer and how to leverage that understanding in their own systems.

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