Dan Noland

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EDUCATION

PURDUE UNIVERSITY

MS Computer Science
Dec 2004 | West Lafayette, IN

BS Computer Science
May 2001 | West Lafayette, IN

SKILLS

PROGRAMMING

Strongest
C • C++ • Perl
Strong
Java • Python • x86 Assembly
Familiar
Pascal • PPC Assembly • SQL

OTHER SKILLS

Reverse Engineering • Cryptography
Anti-Tamper • Vulnerability Assessment
Scrum Master • Continuous Integration
Agile Development • Unit Testing
gdb • IDA Pro • WinDbg
Systems Programming • TCP/IP
XML • CGI • Linux • Windows
Linkers & Loaders • COFF • ELF
Network Security • tcpdump • DNS
Firewalls • SSH • SSL

CLEARANCE

TS/SCI

COURSEWORK

GRADUATE

Information Assurance & Security
Cryptography
Operating Systems
Algorithm Design & Analysis
Network System Design
Compiler Design

UNDERGRADUATE

Computer Architecture
Data Structures
Operating Systems
Software Engineering
Computer Networking
Security
Artificial Intelligence

EXPERIENCE

STAR LAB | Senior Security Architect

Feb. 2015 – Present | Washington, DC

- Served as Anti-tamper subject mater expert for a large Navy program. Created white papers and briefed leadership.
- Implemented custom security algorithms to ensure that the system was running on authorized hardware using a custom SYSLINUX bootloader and standard cryptographic algorithms.
- Conducted research and development into novel applications of Intel SGX technologies.

MICROSEMI | Software Lead / Sr. Software Engineer

Sept. 2010 – Jan 2015 | West Lafayette, IN

- Led software team of 8+ to develop the company's new flagship software protection engine with the ability to obfuscate and protect x86 and PPC code.
- Implemented "whitebox" versions of many standard cryptographic algorithms including RSA, AES, and ECC to mitigate key lifting attacks on hostile targets by mathematically decomposing keys.
- Served on the Design and Architecture Committee with final oversight of software architecture for the division.
- Spread technical knowledge by acting as technical expert at sales calls, providing training, and helping customers resolve issues.

ARXAN DEFENSE SYSTEMS | Software Lead / Sr. Software Engineer

Dec. 2004 – Sept. 2010 | West Lafayette, IN

- Worked on a team that successfully reverse engineered (Red Team) and defeated a major DRM system.
- Fortified customer code against tampering and reverse engineering with custom-developed software protection mechanisms.
- Designed and implemented an evolutionary algorithm to automatically generate software protections.
- Designed and implemented a software protection web portal allowing customers to remotely protect their software.
- Added new features and fixed defects in the core software protection engine.
- Contributed to a number of DoD SBIR proposals resulting in total awards in excess of $500,000. Personally authored a proposal resulting in an award of $200,000.

PURDUE UNIVERSITY RESEARCH COMPUTING | Programmer

Jun. 2003 – Dec. 2004 | West Lafayette, IN

- Worked with professors in engineering, statistics, and mathematics to help them optimize and improve their research code.
- Administered grid computing tools, certificates, and accounts.

PUBLICATIONS

- K. Simonsen, D. Noland, and C. Le: An Efficient Algorithm for Simulating Coalescence with Recombination. Computing Science and Statistics Volume 36
- P. Meunier, S. Nystrom, S. Kamara, S. Yost, K. Alexander, D. Noland, and J. Crane: ActiveSync, TCP/IP and 802.11b Wireless Vulnerabilities of WinCE-Based PDAs. Proceedings of Eleventh IEEE International Workshops on Enabling Technologies