Declan Woodham

+447480828664
email@declan.xyz
declan.xyz

WORK EXPERIENCE

GemaSecure, Basingstoke
Secure Software Development, Internship

10 Weeks, Summer 2020

Assisted in development and design of a Low SWaP FPGA based IoT/IoBT device utilizing Wireless Mesh, Blockchain and Zero Trust technologies to provide reliable low and high bandwidth connectivity and data transfer in tactical situations while maintaining secure data integrity.

GemaSecure, Basingstoke
Secure Software Development, Internship

10 Weeks, Summer 2019

Worked in a small team to design and implement a proprietary application layer protocol, used for handling anonymous, high speed, and secure communication between IoT and Embedded Devices. Following an agile methodology, an implementation was produced with the ability to switch between network interfaces with different communication layer protocols such as WiFi, Bluetooth and Zigbee while maintaining identification and session with the server.

Foreign and Commonwealth Office, Hanslope Park
Security Research and Development, Internship

8 Weeks, Summer 2018

Followed a test-driven, iterative agile methodology to develop tools to assist and streamline the process of embedded firmware image disassembly for security research. Further collaborated with a team of 11 interns to assess the state of security on an embedded security device.

All References available upon request

EDUCATION

Abertay University, Dundee
Graduate Summer 2021

Expected First - BSc Ethical Hacking

Lowestoft Sixth Form College, Lowestoft
2017

BTEC Level 3

Triple Distinction Star (**D***, **D***, **D***) - Extended Information Technology

Sir John Leman High School, Beccles
2015

GCSE

A* - IT Application Skills

B - Maths, Science, Additional Science, Religious Studies, English

C - Business, Media, History

PERSONAL STATEMENT

A hardworking individual who enjoys ever-changing challenges when working. I believe I am an interesting person who, when working in a team, can bring a different - and often useful - perspective to difficult problems.

Possessing an aptitude for technology and a willingness to learn, I've always had a lifelong passion for taking things apart and learning how they work - something I feel has helped to guide and steer me towards a career in Cyber Security.

I thoroughly enjoy the chase and intriguing nature of looking for mistakes and weaknesses in software and understand the patient nature of the process. With my previous experience, I know that I am pursuing the career I want to be in, and I am excited to get back to the work environment to further develop my skills and expand my knowledge.

Away from the keyboard, I enjoy socialising with friends, 35mm photography, mountain biking, and djing.

SKILLS

Fluent Python, C++, and Java Developer

Full Stack Web Development

Reverse Engineering

Penetration Testing

Memory Exploitation

Web Server Exploitation

Android App Development

Digital Forensics

Risk Assessment, Compliancies and Project Planning

Agile Framework Experience

AWS Academy Cloud Foundation

Git Version Control

HMGCC BLK BOX

Jira Project Tracking

JetBrains IDE Suite

Jenkins CI

PROJECTS

Honors Project - *2021*

Researching and Developing an advanced portable executable packing tool in C++ and ASM to evaluate the effectiveness of modern antivirus software against advanced packing and antivirus evasion techniques.

Cloud Monitored Embedded Door Alarm System — *2021*

Developed a full-stack cloud monitored door alarm system using numerous AWS services including IoT Core to communicate to the embedded device with MQTT. Additionally, a Linux Loadable Kernel Module was developed to communicate between userspace and the hardware connected to the device.

Windows Exploit Development — *2020*

Developed a proof of concept exploit to launch a remote shell for CoolPlayer 2.19 utilising a buffer overflow with DEP enabled, using various techniques such as ret2libc and ROP chains. Used Windows Debugging tools such as Immunity Debugger and x64dbg.

Automated Network Penetration Software— *2020*

Developed a cross-platform, multithreaded software tool which attempts to automate and speed up the enumeration stage of a network penetration test in Python. Features the ability for users to write custom plugins and produce a report of outputs from third-party software tools such as NMAP.

Encrypted SMS Android App — *2020*

Developed an Encrypted SMS Application for Android using Java to provide secure communications over SMS with other users of the application. Utilized Elliptic-curve Diffie–Hellman to establish a shared secret over the insecure SMS channel.

C++ Multithreaded Cryptographic Hash Cracker — *2019*

Developed a highly efficient dictionary-based cryptographic-hash brute force tool in C++ with support for MD5, SHA1 and SHA256. Tested with a control of a million hashes and up to 8 threads, recording the fastest, median and longest times producing results of over a million hashes in under 1 second.

Network Exploitation and Mapping — *2019*

Given a live machine in an enterprise network, a network vulnerability assessment alongside a network topology and subnet map was produced. Offensive Network Security techniques such as pivoting were employed to gain further access to prohibited and firewalled areas of the network.

Web Application Security Assessment — *2019*

Assessed the state of security and proposed improvements for an online food ordering and booking software application. Followed the industry-standard OWASP Web Testing Methodology finding over 7 Critical Vulnerabilities including Remote Code Execution and SQL Injection.

Digital Forensics Investigation — *2019*

Given a hard drive with pseudo child pornography and proposed the task of providing evidence using industry-standard forensic tools such as Sleuth Kit (Autopsy), which could be used in court to document the illegal content found.