Sebastian Fischer

\$\mathbb{\psi}\$ +45 29 22 91 75
\mathbb{\sigma}\$ sebastianfischerdk@outlook.com
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Work experience

Present

Cybersecurity Consultant (DART), Microsoft, part of the "Detection And Response Team" operating in both reactive and proactive settings. Threat hunting and Incident response operations with a data science approach with "KQL", in relation to hunting for threat actors in an environment (cloud/on-prem), while combining proactive services. This entails operating in highly stressed environment, needing to be operate quickly and handle people in crisis..

2021-2022 Security Customer Engineer, *Microsoft*, Previous role in Microsoft - advising, guiding and implementing with customer security teams with defending their infrastructure and securing their organization through Microsoft technologies both on-prem, multi-cloud, and Azure native. Focus on building, structuring and architecting PoCs and coordinating with teams to implement and create working solutions within essentially any form of security, ranging from IAM, Azure security components, DevOps, containers, threat and vulnerability management, GRC, etc.. Also focus on presentations, stakeholder management and presenting to higher level stakeholders to illustrate value.

2020-2021 Software Developer, Lars Thrane A/S, Engaged with small agile team of developers, developing various tools in relation to maritime global emergency systems, thereby being exposed to a wide set of tools, techniques and experiences. Directly involved with the development of multiple automation tools, with the major objective of decreasing and optimization production flow thereby increasing output performance. This was done in order to remove a large set of tasks that were typically done manually and physically by a human. Assisted in the further growth and maturing of varying unit tests with the main purpose of ensuring code coverage and proper function of software as well as physical hardware (Device under testing, etc.) Also developed scripts to automate encryption and protection of production code on custom linux distros. Mainly programmed in Python and C, in combination with Jenkins and Docker .

2018-2020 Jr. Consultant, Deloitte, Cyber Secure, Copenhagen.

Tasks include running and maintaining an external scanning server for audits of clients' security (webapps, firewalls, etc.) and writing reports in regards to vulnerabilities present as well as writing various scripts to confirm these vulnerabilities with Python2/3, metasploit, kali, Nessus etc.

Education

- 2019–2021 M.Sc. Computer Science & Engineering, Technical University of Denmark.
- 2016–2019 B.Sc. Network Technologies and IT, Technical University of Denmark.
- 2013–2016 HTX Gymnasium Math & Physics, HTX Vibenhus.

Research & Projects

- 2021 **IoT end-to-end security**, M.Sc. Thesis, Developed an entire setup of end-to-end PoC solutions with IoT devices employing various protocols (NB-IoT, Sigfox, WiFi, BLE, MQTT) to communicate with a custom-built server hosted on an Azure VM. This was with the objective of using high-performance authenticated encryption algorithms to provide E2E confidentiality of the transmitted payload (data). Furthermore, a performance evaluation was done in order to conclude which cryptographic algorithm was most fitting in terms of processing power of the microcontrollers' CPU.
- 2020 Occupancy Counting System For Auditoriums Using IoT based WiFi Sniffer, DTU, Implemented a WiFi frame sniffer in C, able to scan 2.4GHz/5GHz spectrum and extract MAC addresses from frames to attach MAC addresses originating from devices to keep count of people in a room/auditorium. The source code was implemented on embedded systems which meant major complexity in regards to a single core needing to both observe frames and interpret.
- 2020 Gate Counter Raspberry Pi, Roskilde Festival & DTU, Project with Roskilde Festival where we developed a Raspberry Pi solution with a camera which is able to count people going in and out of a gate based on recognizing people with machine learning. Sadly cancelled due to COVID.
- 2019 Security Aspects of IoT (Internet of Things), B.Sc. Thesis, Implemented a C version of a hybrid cryptosystem using AES and RSA in Arduino based platforms in regards to power management, CPU usage, etc. Furthermore, a Deauthentication attack was implemented in Python to test its affect on WiFi IoT based solutions and its effectiveness as well as various forms of DoS attacks (TCP SYN, ICMP, UDP floods)...

General Technical Skills

Programming Experience

Python - 2 Yrs. Exp.

C - 2 Yrs. Exp.

KQL - 1 Yrs. Exp.

Java - 1 Yr. Exp.

Technical Experience

Networking

TCP,UDP,IP,BLE,802.11,etc.

Docker, Virtualization, Vagrant

Identity & Access Management

ISO, CVSS, NIST

Unit Testing

Continuous Integration

Agile Methodologies

Pytest, Django, Jenkins

IoT, embedded SW

Webscraping, Security,

Defender for Cloud, Defender for Endpoint,

Defender for Office, Defender for Identity,

Azure Sentinel

Azure operations, VMs, Docker, etc.