

Sean Burton

The Old Stables, 4b Silt Road, Littleport, Ely, CB6 1QD

Tel: +44 (0)7761 047 731

E-Mail: seanjburtont@gmail.com

Nationality: British Date Of Birth: 29/06/1984 Driving License: Yes

Summary

I am an experienced software developer with an aptitude for logical thinking, looking for new challenges in a position where my skills in problem solving, as well as my experience and enthusiasm for programming, can be used to their full extent, and where my talents will allow me to steadily advance my career going forward into the future.

I am quick to learn new technologies and to familiarise myself with new code-bases, and I always strive to produce code and solutions which are elegant, efficient and maintainable.

Experience

Senior Innovation Engineer, Thales e-Security (2018-Present)

- Research and experimentation with new technologies and concepts
- Rapid prototyping of new products and features
- Projects include:
 - Developing Intel SGX enclaves along with accompanying attestation framework
 - Various RESTful webservicees implemented using Go
 - Extensions to a Kubernetes operator which interacts with AWS APIs for deploying services
 - Work on filters for Envoy proxy which are to be included in the Istio project

C++ Developer, Transversal (2017-2018)

- Maintenance and extension of large existing C++14 code-base
- Improvements to Python-based test-automation framework based on Selenium

Senior Consultant, Thales e-Security (2013-2017)

- Developing bespoke software solutions for customers, mainly using C, C++ and Java
- Delivering training courses on the usage of Thales products and cryptographic APIs
- Assisting customers with installations and deployments
- Performing health-checks on customers HSMs and information security configurations
- Notable projects include:
 - System for virtualising multiple smartcards inside an HSM, comprising C code running inside SEE (Secure Execution Engine) and a Java-based management interface
 - Bespoke scripting engine using C++ and Boost.Spirit for script parsing
 - Several implementations of custom key derivation mechanisms inside SEE

Level 2 Development Support Engineer, nCipher/Thales e-Security (2007-2013)

- Diagnosing and solving varied customer hardware and software issues
- Assisting customers developing using various cryptographic APIs and programming languages: PKCS#11 (C/C++), JCE/JCA (Java), MSCAPI/CNG (.NET), nCore (C/C++/Java), SEE (C)
- Identifying and reporting bugs in both Thales internal and customer code
- Assisting customers with general API, cryptography and secure development questions
- Acting as a liaison to the Tactical Development Team who investigate bugs and produce hot-fixes, occasionally working with them to track down specific bugs in our source-code and/or produce a hot-fix for a particular bug
- Developing internal tools such as a Ruby-based web interface for checking module support history which is required to aggregate data from multiple legacy SQL databases

Education

B.Sc Computing, University Of Hertfordshire (2003-2007)

- Final grade: 2:1

A-Levels, Hills Road Sixth Form College (2000-2002)

- B in Computing
- C in Mathematics

GCSEs, Comberton Village College (1995-2000)

- 3xA* in Mathematics and Double Science
- 3xA, 2xB, 1xC, 1xE

Skills

Software Development

- Began learning programming around the age of 11, using AMOS (BASIC) on an Amiga 500
- Programming primarily using Go and C++ (including C++11/14/17, STL and Boost)
- Also some experience using C, Java, Ruby, Python, Rust and JavaScript/TypeScript
- C/C++ unit testing using Google Test and Google Mocks, Java using JUnit, Ruby using RSpec, etc
- Always interested in keeping abreast of new languages, technologies and methodologies such as Rust, C++11/14/17/20, Angular/RxJS, Test/Behaviour Driven Development as well as functional languages such as Haskell and Elixir

Information Security

- Expert knowledge of the Thales nShield range of hardware security modules (HSMs)
- Usage and best practices regarding symmetric and asymmetric cryptography, PKI, SSL/TLS
- Secure application development and cryptographic application design and architecture
- Development of secure web applications, OWASP principles, XSS mitigation, etc
- Cryptographic APIs – JCE/JCA, PKCS#11, MSCAPI/CNG, nShield nCore, nShield SEE, OpenSSL

DevOps

- Continuous Integration using Gitlab or Jenkins, using various build systems such as CMake and Bazel
- Containerisation using Docker and Docker Compose, deployment with Kubernetes and Helm charts
- Service mesh configuration using Istio

Miscellaneous

- Working knowledge of SQL and database principles, mainly using MySQL and PostgreSQL
- Familiar with every-day usage and basic administration of both Linux and Windows
- Front-end web design/development (JavaScript/TypeScript/Angular/HTML/CSS)
- Back-end web-server and REST API implementation (Ruby on Rails and Go/Swagger)
- Basic network concepts and administration using Windows and Linux; TCP/IP, routing, etc

Certifications

(ISC)²

- CISSP: Certified Information Systems Security Professional (**Expired**)

Thales e-Security

- nCSE: nShield Certified Systems Engineer
- nCSD: nShield Certified Solutions Developer

Interests

Much of my time is spent trying to further my general programming knowledge, with recent focus on learning about the Rust programming language as well as the general principles of functional programming.

My other interests include using my computer to produce music, as well as for gaming.



github.com/sburton84



www.linkedin.com/in/sean-burton-38a9532



stackoverflow.com/users/2139902/sean-burton