

## Technical Skills

### Programming

Isabelle, C#, Java, HTML/CSS, JavaScript, Ruby  
Haskell, Assembly Coding, Visual Basic, BIL  
Python, SAGE(Python Extension)

### Services / Systems

Linux OS, GitHub, Microsoft Office, BitBucket

### Databases

MySQL, SQL Server, SAS

---

## Practical Experience

- Software Development
  - Regular use of version control systems
  - Completion of Global Engineering Challenge
  - Object-oriented programming
  - Agile development
  - Team leadership
  - Client Interaction
  - Database schema Design and Development
  - Formalising Operational Semantics
- 

## PhD Computer Science, University of Sheffield (EPSRC DTP Studentship Grant)

Under the direction of Dr Andrei Popescu, formal training in Isabelle/HOL and computational semantics with aims to:

- Formalise major cryptographic protocols
- Combine formal models for information-flow security with the formal certification of cryptographic primitives to achieve end-to-end security guarantees that combine crypto and system-level information flow security.
- Achieve an understanding of the holistic multi-layer security guarantees that we can provide for interactive systems made available over the internet

## Publications:

*Relative Security: Formally Modeling and (Dis)Proving Resilience Against Semantic Optimization Vulnerabilities* (37th IEEE Computer Security Foundations Symposium (CSF 2024))

Brijesh Dongol, Matt Griffin, Andrei Popescu and Jamie Wright - Accepted.

---

## Bsc (Hons) Computer Science and Mathematics w/ Year in Industry, University of Sheffield (2018 - 2022) (1st Class Honours)

- Dissertation: A formal representation of abstract two player games using Isabelle/HOL capturing properties such as winning strategies and unstoppable plans
  - Completed a SURE research project with Dr James Cranch on Computational Euclidean Geometry which aimed to capture geometric properties of maths olympiad problems
  - Developed customer-oriented interaction, and software analysis and design skills to create robust software systems for clients
  - Acquired awareness of cyber threats along with the security policies and design strategies that reduce system vulnerabilities
-

## Placement - Statistical Programmer I - Parexel International (July 2020 - August 2021)

- Working with a global team to prepare robust deliverables to large external clients within set deadlines
- Taking upon team leadership responsibilities as delegated by a team leader
- Learning and developing understanding of the SAS programming language
- Delegation to help guide and mentor new placement students as they joined towards my leaving date
- Creating automated self writing code for the statistical team and subsequently presenting this to the UK team

---

## Previous Education/Employment

- A Levels: Maths - A, Computer Science - A, History - B. Notre Dame Catholic Sixth Form College (2016-2018)
- ABRSM Music Theory and Piano Grade 5
- Full UK Drivers Licence
- Lead and organised a team for Global Engineering Challenge and Engineering, You're Hired!
- Part Time work: **KFC (07/16 – 10/17)/Bon Marche (10/17 – 06/18)/NHS Porter (06/18 – Present)**
  - Customer interactions, Accountability, Punctuality
  - Warehouse/stock management, working under pressure in a team environment
  - Cash handling
  - Helping vulnerable people & providing a dignified service to patients

---

## Personal Interests

I thoroughly enjoy playing the piano, guitar and bass guitar; I particularly enjoy composing my own pieces and have released several projects with 'The Verdis', 'AIRE' alongside a solo project. I incorporated my love of music and coding to develop an application designed to teach people how to play the piano. For leisure I enjoy bouldering and playing chess, notably winning a division title for Sheffield University as the team captain.