

Alex Collins

Cyber Security Research, Innovation and Development
Software Engineering



PROFILE

An inquisitive and versatile software engineer and technical leader.

Alex conducts cyber security research, software reverse engineering, high assurance software development, and acts as a solution architect and system design authority.

Alex enjoys leading teams and is passionate about skills growth and innovation. He created Roke's Cyber Launchpad training programme, and setup Cyber Springboard to help more people get into cyber careers.

Alex has served on the Industrial Advisory Board for Oxford University's Centre for Doctoral Training in Cyber Security, and on the Strategy Board for Southampton University's Cyber Security Academy.

SKILLS

Software engineering:

- C, C++, C++/CLI, C#, Go, Python, Ruby, Java, JavaScript
- MySQL, SQLite, PostgreSQL
- Distributed systems, simulation
- Linux, MacOS, Windows, iOS, Android

Information assurance:

- Threat modelling, risk identification, treatment and management
- Security architectures and controls

Software reverse engineering:

- Ghidra, IDA Pro
- Forensic analysis

Networking and telecoms:

- IP networking and protocol analysis, Wireshark decoders
- Cellular networks

AVAILABILITY

Part-time, remote

CONTACT DETAILS

alex.collins@cantab.net

EXPERIENCE

Head of Cyber & Networks Profession, Roke

2014 - 2021

- Vision and strategy development across the profession, including:
 - Creating Roke's Cyber Launchpad training programme and embedding in Roke's five-year strategy.
 - Identifying, nurturing and exploiting innovation.
 - Business winning across Industry, Defence and National Security.
 - Communicating with diverse stakeholder base, building a community.
 - Academic liaison.
- Delivering cyber security projects and products, including:
 - Security research, including software reverse engineering, systems analysis and hardware teardown.
 - Technical assurance, system design authority, and high assurance cyber-security software engineering.
 - Leading system design and code reviews, policies and processes.
 - Development and delivery of internal and external training.
- Engineering management and support within profession, including:
 - Context sharing, career and skills planning, objective setting.
 - Management of line managers.
 - Mental health first aid.

Solution Architect, BAE Systems Applied Intelligence

2013 - 2014

- Developing new regulatory compliance solutions in response to technology changes for lawful interception and data retention.
- System design, scoping, and development, working closely with developers, systems engineers, product managers and support teams.
- Identification, development and closing of sales opportunities up to £2m, including proposal writing, pricing and contract negotiation.

Software Engineer, Schlumberger

2011 - 2013

- Delivered new suite of Ocean APIs and hydraulic fracturing plug-ins.
- User-experience refresh of Petrel's Reservoir Engineering domain, working with teams in Norway and Texas.
- Delivered new simulation workflow licensing module.

Principal Consultant, Detica

2006 - 2011

- Held a variety of consulting-led and service-delivery roles, including:
 - Acquisition team lead for the Treidan managed SOC service.
 - Systems engineering within deep packet inspection systems.
 - Model-driven software engineering.
 - Quality assurance and infrastructure management team lead.
- Leading client engagements, technical architecture, pre-sales, business analysis, proposal writing.

EDUCATION

Peterhouse, University of Cambridge

2002 - 2006

1st class, BA (Hons)

Natural Sciences, Computer Science, Management Studies.