

# John Nicholas Soutar Gill

Software architect and risk problem solver

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## Technical Skills

### Python

14 years python experience on both Linux and Windows platforms. Speaker at PyCon North America on two occasions. Familiar with a wide range of scientific and web development packages and seamless integration with other languages.

### .NET/C#

Solid understanding of C# and the .NET platform. Good understanding of running .NET code under mono on the linux platform.

### C/C++

25 years experience of C programming on platforms from micro computers to Cray super-computers.

### Other Languages

Perl, TCL, lisp, Fortran, IMP, Visual Basic, Algol, 8086 assembler, datalog, SQL, lua, javascript, HTML, CSS.

### Parallel computing

30 years experience of super-computing. Solid knowledge of parallel computing, distributed file systems and distributed database technology. Experience of programming custom built special purpose computers.

### Version control

Git and github usage. Familiar with Bazaar, Mercurial, SVN, CVS, RCS and SCCS.

### Test Driven Development

Proficient in use of test frameworks including use of mock objects and build automation using tools such as teamcity.

### Statistical and mathematical skills

Strong statistical and mathematical background.

### Computer simulation

Over 20 years experience of computer simulation, optimisation and machine learning.

### Natural catastrophe modelling

17 years experience of catastrophe modelling; particular emphasis on hurricane modelling, capital allocation and risk pricing.

Good understanding of the open source, Oasis Loss Model Framework as well as commercial catastrophe models.

#### Cryptography and computer security

A strong interest and deep working knowledge in all aspects of cryptography, including public key cryptography. Solid understanding of cyber risk and state of the art web protocols. Interest in distributed systems using blockchain technology.

Excellent understanding of issues around privacy, identity management and security in today's cloud based computing environment.

Good appreciation of the importance of user interfaces affecting computer security.

Understanding of the many issues and weaknesses with current best practice in computer security.

#### Mobile

Interest in mobile apps, including writing python geolocation software on Nokia Series 60 phones.

#### Operating systems

20 years experience using RedHat, Debian and Ubuntu Linux.

Linux installation, user/group management, Partitioning and LVM management, Sharing file system using NFS, LDAP, Samba, FTP, SSH server configuration, Firewall configuration (iptables), Apache configuration including virtualhosts, SSL configuration, business continuity. Clustering using IPython cluster as well as map/reduce concepts.

Proficient in use of windows and 17 years experience integrating Windows and Linux.

SGI IRIX Unix, Cray UNICOS and Solaris.

FOLKLORE operating system used in the signals intelligence community in the 1980's.

## Management Skills

Proven success and experience identifying opportunities to improve and suggest solutions to maximise company success.

Solid experience in computational analysis and data visualisation, working in teams on challenging, multi-disciplinary problems.

Proven ability to write scientific research papers to provide senior management with evidence based recommendations.

Good understanding of the tools and techniques required for repeatable research in computational data analysis.

Strong skills in technical documentation and ability to present complex subjects to audiences with a wide range of skills and understanding.

Ability to work well in a collaborative environment. Took the lead in introducing collaboration tools such as intranet, wikis, group chat and blogs.

## Career History

### March 2013 - current: Risk Solutions Architect, Tokio Millennium Re

Design and build next generation risk systems for Tokio Millennium. This involves migrating from existing monolithic .NET systems to more flexible, component based architecture capable of running on a heterogeneous cluster of cross-platform computers.

### July 2008 - August 2012, Consultant to Renaissance

Self-employed consultant working on a variety of risk analysis and software development projects.

### February 2000 - July 2008, Vice President, Renaissance Reinsurance, Risk Analysis

Design and build Renaissance's risk and portfolio analysis tools. Responsible for all aspects of the software development lifecycle. Assist with development and implementation of new models.

### May 1997 - February 2000, CCS Group.

Senior consultant working at Renaissance Reinsurance.

Responsible for design and development of REMS risk analysis systems.

### October 1984 - May 1997, Senior Scientific Officer, GCHQ, Cheltenham

Working on communications security for the British Government.

1993-1996 on secondment to the Communications Security Establishment, Canada.

## Education

### 1987 - 1990: Sheffield Business School

1989 Post-graduate Diploma (with distinction) in Operational Research.

1990 M.Sc. in Operational Research.

### 1981 - 1984, University of Warwick

B.Sc. class one in Mathematics.

## Interests

Running, hiking, skiing, technology and electronics.

Mentoring others in their software skills.

Involvement in open source communities over a period of 25 years, including:

- Sun users group
- Irish Linux Users Group
- Python Ireland
- Ottawa Ubuntu Users
- Ottawa Linux Users Group
- Python and PyCon
- Open Bermuda

References on request