

# SIMON GARTON

Principal Software Engineer

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## SUMMARY:

Experienced software engineer, with nearly 30 years in the industry; broad experience with many technologies, across different industries - utilities, telcos, local government, and financial services. Wide-ranging interests, non-conventional background. Curious, persistent, and detail focused.

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## SKILLS:

### Coding:

Java, Python, Javascript. Simple, strong patterns, reusability. Huge fan of Advent of Code.

### Cloud Native:

Experienced AWS developer. Close links to AWS NZ, evaluation of beta products.

### Visualisation:

Pictures tell a thousand words. Excel, GraphViz, Processing. Lucid for diagrams. New Relic and Grafana for monitoring and observability.

### Data:

SQL (PostgreSQL + others); NoSQL (DynamoDB + others); Graph (Neptune, Neo4J)

### Automation

Infrastructure as code - Terraform/OpenTofu, CloudFormation, CDK.

### Soft skills

Outstanding analysis, documentation and communication skills. Investigations and incident management.

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## WORK EXPERIENCE:

### Principal Software Engineer

**Vector Technology Solutions** - July 2023 - Present

- One of two Principals, leading six development teams and 40 developers.
- Architecture, design, planning, standards, documentation.
- Problem solving, investigations, incident management.
- Co-development with AWS (VTS/AWS alliance - some new products not yet publicly available.)
- Evaluations, proof of concepts, releases, deployment orchestration and decommissioning.

### Technical Lead

**Vector Technology Solutions** - August 2021 - July 2023

- Built the foundations for the VTS Diverge platform.
- Managed support and testing, and ran a 4-month "parallel run" : production data forwarded into both the legacy system and the new platform, for functional and stress testing.
- Set up the documentation and standards; built monitoring and logging; wrote runbooks for the alerts and various investigations; worked with the client to design, build, test and implement the platform.

### Senior Java developer (contracts)

**MessageMedia** - January 2020 - August 2021

- Microservices and applications for the MessageMedia (SMS integration) platform. High quality environment: detailed code quality, style, and unit tests, extensive integration tests; multiple stacks, all automated.

**Auckland University** - September 2019 - December 2020

- Multiple microservices, integrating various University systems with the new student management system (Haplo) via Kafka. Java/Spring Boot, Jenkins, ECS, Kibana for logs, Grafana for dashboards.

# TECHNOLOGY STACK:

## Coding:

**Java** since Java 1 back in 1996; currently using **11**, with some **17** and evaluating **21**. **Lombok** for boilerplate code - less is more. **Spring Boot, Dagger**.

**Python** 3.x; extensive use of **boto3** for AWS integration, also data analysis and scripts for automating tasks.

**Javascript** for front end : mostly **React** or **Ionic/Angular**. Personal website is now built in **Astro**, replacing my previous **Hugo** one.

**Mobile** : team lead role at **Fiserve** focused on development in both **iOS** and **Android**.

## AWS:

Serverless : multiple applications using **API Gateway, Lambda, SNS/SQS, S3** and **DynamoDB**. **Cloudwatch** for logs and metrics, **Athena** for queries. **Timestream** for time-series data, **Aurora** for relational data.

**Terraform/OpenTofu** for infrastructure as code; also some **CloudFormation** and **CDK**.

## Data:

Data-first approach - get your model right, and the application will follow. I started with classic relational databases (**SQLServer, DB2**) and now use **PostgreSQL** (and it's spatial extension PostGIS) for relational work, and personal projects; in the cloud I'll use **RDS / Aurora**, and **DynamoDB** for NoSQL. My main focus for the past three years has been time-series data, using **Timestream** and **InfluxDB**. Recent work has explored and implemented graph databases, primarily **Neptune** (gremlin) and **Neo4J** (cypher.)

## Spatial data:

Long history with **Smallworld**, also **ArcGIS, PostGIS, GeoServer** and others.

## Visualisation:

**Excel, GraphViz, Processing (p5js), D3, New Relic** and **Grafana**.

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# OTHER ROLES :

## Vice-President, Engineering

**Dexibit** - May 2017 - June 2019

- Big-data analytics for museums and galleries.
- Java front-end (Vaadin), Python back-end (data pipelines), hosted on AWS.
- Ticketing, visitor-tracking (wifi), predicting revenue, sentiment analysis of reviews.

## Mobile Team Lead

**Fiserv** - November 2014 - December 2016

- Mobile development for a large multi-application, multi-tenanted financial services company.
- System Team : feature integration, detailed investigations, tier 3 support.

## TreeCapture

**self-employed** - late 2000's

- Built a successful field/mobile solution for tree-trimming companies : capture species, location and work done/required in the field on a PocketPC with full maps and aerial support; download in the office for invoicing, planning and analysis.

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# PERSONAL:

**Nationality** - Dual British/New Zealand, resident in New Zealand.

**Interests** - Tramping, IoT, music

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# EDUCATION:

**Master of Science (Biology)** - 1990-1993  
University of California, San Diego

**Bachelor of Science (Zoology)** - 1986-1989

First-class honours. University College of Wales, Aberystwyth