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## GARRARD KITCHEN, B.Sc (Hons)

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### Interests include:

- Serverless technology
- .NET Core
- Blazor
- DevOps
- AWS
- Azure
- Machine Learning
- Security
- Research
- Project Management
- Product Owner

### Ideal locations:

- Southport
- Manchester
- Liverpool
- Preston

Full driving license

### Profile

I am a technical project leader, experienced in communicating at all levels, with commercial awareness, I am accustomed to identifying improvement opportunities outside of scope.

In my current role of **Principal Engineer** at Carfinance247, I report directly to the DoE (Director of Engineering). I work across teams to educate, assist & advise. I also contribute to the active sprint. I work on side projects and PoC (proof of concept) projects. I have delivered brown bags on both AWS & Google Serverless services. I help to shape HLA, improve coding quality and engineering standards. I am a team player and help support my colleagues and CF247 operations whenever the opportunity arises. I provide direction and guidance on matters relating to cloud computing, architecting and developing for the cloud. I am cloud first, a polyglot and an advocate of serverless technologies.

At my previous position, **CTO/Developer** Qualtrak Solutions, I had developed and nurtured a culture of DevOps. This gave me and my team the freedom, responsibility and ownership necessary to help drive the business. With the use of appropriate services (CloudWatch, Datadog, OpsGenie, Sentry.io, Epsagon, Stackify, Slack) to deliver observability, and frameworks, I instilled the AWS Operational Excellence & Reliability pillars into the company's culture. This included, but was not limited too, the creation of runbooks across multiple platforms to automate (e.g. autoscale ECS Fargate containers) and monitor both infrastructure and solution features to minimise downtime (RPO). I architected massively scalable HA, fault-tolerant and secure solutions, with DR, driven by serverless technology (such as AWS Lambda, Step Functions, API Gateway & ECS Fargate) and loosely coupled (e.g. Amazon SQS, SNS & Kinesis Data Streams). I used .NET Core (C# & F#), python and node.js interchangeably during my time in this position. My architecture included several different types of database (RDBMS, NoSQL & in-memory) including Aurora, MS SQL, DynamoDB, Elasticsearch & Redis). All my systems were integrated, packaged and deployed using a common CI/CD approach using tools such as Azure DevOps, CodePipeline, CodeBuild, CodeDeploy, OctopusDeploy, BitBucket Pipelines and Jenkins. My chosen container orchestration solution was ECS Fargate with ECR and Docker Hub registries. All stages of the release cycle were both monitored and automated. I created a polyglot development environment with a team that gave maximum effort and commitment. My serverless journey started on the Azure platform several years ago. I have used

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Azure for several years and using this platform I have architected, developed and deployed several massively scalable solutions.

I have a proven track record of systems integrations, acting as a remote worker manager of a European team, project managing across multiple time zones and cultures. I have a strong technical background in both server & client side development as well as serverless technologies (infrastructure, services & frameworks) and solutions delivery driven by DevOps. I am obsessive about quality UX, and with solutions that deliver on a positive CX. I am a full-stack developer.

## Experience

### ***Principal Engineer, Carfinance247 — May 2019—present***

These are some of the projects/activities I have worked on:

- I have delivered brown bags on AWS serverless services and Google serverless options (*Cloud Functions & Cloud Run Knative, deployed via GitHub Actions*)
  - I have help maintain enterprise Twilio CRM using angular 1.x and supporting HTTP API microservices hosted & load balanced in docker Swarm
  - I worked on a Pilot project that assessed both Google and Azure Cloud services. Some of this work, especially story spikes, required pair programming
  - I have created a solution that subscribed to Azure Event Grid and Azure Service Bus (*topics & queues*) and used Azure SignalR Service to update a UI hosted on AKS
  - I worked on the new Vehicles team, helped shape development principals and used Jenkins and Google services including GKE
  - I am working with the Phoenix & Integration team to help maintain and add features to several .NET Core C# and UI git repositories
  - I have created equivalent EDA in AWS (*node.js, Serverless, SQS, SignalR, ASP.NET Core*) from PoC written/architected using Google servcies in a fraction of the time plus architected the solution to deal with edge/corner cases using architecture instead of code
  - I have created Bamboo build & deployment projects, as well as Azure DevOps CI/CD pipelines
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- I have created as part of the GitHub/Jenkins CI/CD pipeline, .NET Core WebApplicationFactory based functional tests that span multiple docker services
  - I researched and deployed (docker) Snyk for checking for code/library vulnerabilities, code quality and docker image scanning
  - I have participated in multiple inception, helped shape HLA and define requirements
  - I drew on observability experience to (a) implement / deploy Prometheus time series Db for use with (b) new Grafana dashboards (based on google's USE & RED methods) to help monitor both infrastructure and application performance
  - I am architecting a solution that uses github GraphQL to provide better visibility on repository dependencies
  - I educate, provide guidance, insight and assist colleagues across multiple teams
  - I called on load/stress testing experience to assess HTTP API demand limitations and help identify and fix defects
  - I am an active participant in sprints and a strong advocate of Agile (Scrum) & XP development in general
  - I have worked on side projects and experimental work for DoE
  - I am working on a PoC project using Azure services (CosmosDB MongoDB API, Azure Functions, Event Grid, Service Bus, DevOps), Twilio & Terraform

### ***CTO, Qualtrak Solutions; Remote worker — Sep 2008—Apr 2019***

I managed a team of remote workers around Europe to develop single server, HA & cloud based solutions using a range of technologies.

I lead technical projects, architecting product systems and feature solutions and coordinating integrations with partner/SI teams around the globe.

The role is varied; ranging from technical presentations to CxO, DevOps, Full-Stack development to root cause analysis. I categorise myself as a CTO/developer (very hands on!) with extensive serverless development experience specialising in DevOps. Reporting directly to the CEO. All projects managed using Agile methodology, aided by the Atlassian products (e.g. Jira).

These are some of the projects I had worked on:

- ***Integrations*** - To assess vendor's API then PM across timezone and culture. C#, RESTful API, OAuth, Active Directory, Silverlight, JavaScript, Ajax,
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WebSockets, Webhooks, Serverless. Zendesk, Twilio, Telax, DataVoice, Komutel, Altitude, Dubber, Frequentis, Spitch, Amazon Connect, Redbox.

- ***New Corporate website (not released)*** - 100% serverless application (SAM ASP.NET Core Razor Pages template, Bootstrap, CloudFormation, API Gateway, Lambda, S3), staged environments
  - ***Automation*** - CloudWatch Events, Lambda, CloudFormation, API Gateway, SSM
  - ***Observability*** - CloudWatch, Datadog, OpsGenie, Sentry.io, Epsagon, Stackify
  - ***CXcoach retheme*** - ASP.NET Core Razor Pages, Bootstrap, CoreUI, UX design
  - ***CXcoach IntelliSearch*** - Step Functions, ETL, Python, C#, Node.js, Serverless Framework, F#, xUnit
  - ***CXcoach Dashboard*** - Step Functions, ETL, Python, Pandas, NumPy, JupyterLabs, C#, ASP.NET MVC, Javascript, Redis, Node.js, Serverless Framework
  - ***CXcoach cloud application*** - Rewrite of Evaluate HA, migrated away from MSSQL to Aurora, 100% AWS serverless, ECS Fargate, C#, F#, .NET Core, ASP.NET Core Razor Pages, Azure DevOps, AWS Glue, CodePipelines, CodeBuild, BitBucket Pipelines, Bootstrap, Node.js, Python, Pandas, NumPy, JupyterLabs, Serverless Framework, SAM, Redis, Cognito, NGNIX, DynamoDB, S3, SSDT, xUnit, TDD, staged environments
  - ***Evaluate HA*** - New Continuous Deploy model - OctopusDeploy, NATS.io, C#, Azure DevOps, Azure, Amazon Workspaces, Simple AD, Redis, RDS, S3, ALB
  - ***Container orchestration*** - Researched substitute solution. Learnt Kubernetes, AWS EKS, kubectl
  - ***UX Principles*** - Compiled list of principles we as a team must adhere to when developing software that interfaces to a human. I created a git repo with examples on how a product/feature must react under different scenarios. C#, JavaScript, async, ASP.NET Web API, Ajax, HTML
  - ***QcoachSA*** - Integrated with several Speech Analytics Services, new IntelliData module, C#, F#, Azure Functions, ASP.NET MVC, JavaScript,
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HTML, CSS, Bootstrap, RESTful API, Azure, ElasticSearch, MS SQL, Azure Storage, Queues, Tables, VSTS, SSDT

- **E4AC** - AWS, CloudFormation (nested stacks), Amazon Connect, AMI, AWS Marketplace, S3, CodeDeploy, VSTS, Active Directory, Powershell, C#, JavaScript, ASP.NET MVC, JQuery, Angular, BootStrap, Simple AD, DynamoDB
- **Qcoach** - Azure, Cloud Agent evaluation and coaching platform, ARM, Web Azure Services, VSTS, xUnit, TDD, SSDT
- **CI/CD** - Researched and presented CI/CD workflows on container orchestration for windows containers - Jenkins, docker, Windows Server 2016
- **Evaluate HA** - Akka.NET, Windows Server 2012, internal cluster, ASP.NET MVC, C#, VSTS, JMeter, Stackify, xUnit, TDD
- **QTag** - Azure, Node.js, HTML, Azure Web Services, Azure Queues, Azure API Apps
- **Evaluate (Migrated away from Silverlight)** - C#, Angular, Ajax, Silverlight, Web API, RESTful, MSSQL, Windows Server 2012, ASP.NET MVC, TeamCity, mocha, karma, chai, sinon, istanbul
- **Evaluate SDK** - RESTful API, ASP.NET API, Mocking, TDD, Unit Testing, xUnit, Created Developer portal and online Testing tool, ASP.NET MVC, Azure Tables, IoC, Ninject
- **Evaluate agent evaluation solution** - Silverlight, C#, RIA Services, WCF, XAML, MSSQL Web based, SOA, WS-\*, TeamCity, InstallAware, SmartAssembly
- **Qcoach eLearning platform** - ASP.NET Forms, Ajax, C#, JavaScript, JQuery, HTML, CSS, Telerik, WCF, Rackspace
- **Globalizer application** - WPF application, C#, Telerik, Globalization, Rackspace
- **Aspire** - Client/server, WinForms, MSSQL, InstallAware, Telerik, Maintenance & development, S3, Unit Testing, TDD

**Contractor, Qualtrak Solutions; Remote worker — Jan 2007—Sep 2008**

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I was employed originally to develop an API for a company's client/server product. This involved employing Unit testing techniques such as TDD and documentation software and then to ship to integration partners.

I was also awarded the project to design and develop an e-learning and coaching web platform, hosted on self-managed Rackspace servers.

The work gave me my first experience of AWS services.

I worked with partners & system integrators around the world. I was asked to work full-time.

***Contractor, Co-Op; Bromsgrove — 2005—Jan 2006***

I was commissioned to support and enhance solutions using ASP, ASP.NET, c#, javascript, HTML and CSS. This role also included supporting Cadbury's with the Holos product (EIS). I was asked to work full-time.

***Client-side web developer Team Lead, AIM Technology — Apr 2003—2004***

I headed up the client-side development effort of a Scorecard web-application. This was eventually bought by Aspect.

***Data Architect, AIM Technology — Nov 2002—Aug 2003***

My primary role was to consolidate data from disparate systems into a Scorecard application. My responsibilities included providing an OLAP solution, BI, data analytics, pre-sales support, product installation, support and diagnostics. I worked both onsite and offsite. Other duties included enhancing the corporate website.

**Education**

John Moores University, Liverpool — Business Information Systems Degree (Hons), 1994

North East Wales Institute, Connah's Quay - National Diploma in Computer Science, 1990

**Certification**

AWS Solutions Architect - Associate Certification, 2018-2021

AWS Developer - Associate Certification, 2017-2020

1st Dan, Black belt, 2010

**Skills**

<http://www.garrardkitchen.com/#skills>

**References**

Costas Johnson - CEO Qualtrak Solutions, +44 (0)777 5520 459,

[costas.johnson@qualtrak.com](mailto:costas.johnson@qualtrak.com) - <http://www.garrardkitchen.com/reference.pdf>

**Hobbies**

Cycling, reading, research, cooking, walking, drone flying, golf and Ju-Jitsu

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