

George Cairns

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CV

Brighthouse, UK ■ SC Cleared ■ GenAI / Agent / Harness Development / Platform Design / Cloud Architecture / Data Engineering & Visualisation / Application Development / Machine Learning / Devops Consultancy / Digital Transformation

Delivering robust automation, applications, platforms and tooling, with empathy and perspective.

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Skills

Devops & Cloud Automation

Exploits both new and old technology to streamline processes.

Application Development

Systematic, but creative approach to delivering business value.

Data Engineering / ML

Adept at cutting through hype to identify exactly how businesses can best exploit their data using state-of-the-art tools and software.

Product / Delivery

Proven ability to set direction and plan effectively. Laser focused on understanding user need.

Certifications

 Google Cloud Platform - Cloud Machine Learning [2024]

 AWS Solutions Architect - Professional [2019]

 Google Cloud Platform - Data Engineer [2019]

 Scrum Product Owner [Agil-8]

Technologies

Cloud: Google Cloud Platform / AWS / Azure

Hosting: Kubernetes / VMware / Docker

OS / Runtime: Windows / Linux / Containers / Serverless / CUDA

Automation: Azure Devops / Github / Gitlab / Jenkins / Teamcity

Data: Snowflake / Oracle / Bigquery / Jupyter / SQL / Firestore / dbt / FAISS

IAC: Terraform / ARM / Cloudformation

AI/ML: LangGraph / Claude API / OpenAI API / DeepFace / ArcFace / RetinaFace / Tensorflow

Languages & Frameworks: Javascript / Python / Node.js / C# / .NET / Bash / Powershell / HTML / CSS / Svelte / React

SDKs: JIRA API / Trello SDK / Slack SDK / OpenAI Realtime API

Projects

Forward Deployed Engineer - GCP AI/ML

Drax Energy - Gemini Enterprise Agent Platform

■ 2026 [Cognizant Consultant]

Embedded with Drax Energy's retail operations team building a fleet of production ADK multi-agent assistants on Google Cloud's Gemini Enterprise (AgentSpace) platform, spanning fraud/chain-of-title investigation, complaints, losses, novations and letter-of-authority processing. Delivered a two-lane strategy: a SaaS Alpha for immediate AI value, run in parallel with a Terraform-based GCP Landing Zone (IAM, networking,

Product Engineer - Computer Vision

UK Gov - HMPPS Prison Rollcall System

■ 2025 - 2026 [Cognizant Consultant]

Building a cloud-agnostic prison rollcall application using facial recognition technology. The system uses DeepFace with ArcFace and RetinaFace models for accurate prisoner identification during roll calls, designed to run on CUDA-enabled infrastructure.
Technologies: Python, DeepFace, ArcFace, RetinaFace, CUDA.

GenAI / IDP Engineer Legal & General - Docusort IDP Platform

■ 2025 [Cognizant Consultant]

Working on Docusort, an Intelligent Document Processing system for ingesting emails and attachments, using Claude to classify and route queries to the correct teams. Responsibilities included developing LangGraph agent components, email ingestion pipelines, attachment decryption (using Claude to identify password usage patterns and suggest decryption passwords), and building the IDP test harness.

Technologies: Python, Claude/Anthropic, LangGraph, AWS (Lambda, S3, SES, SQS,

governance). Built the MCP server layer integrating internal systems of record (ERS/Databricks, Halo ITSM, SharePoint), the CI/CD release model for a daily-cadence multi-agent estate, and the AI harness engineering (Claude Code skills, subagents, evaluation gates) that keeps delivery fast and safe.
Technologies: Python, Google ADK, Gemini Enterprise (Discovery Engine), Vertex AI / Agent Engine, Claude/Anthropic, MCP, Terraform, GCP (Cloud Run, IAM, VPC-SC), Azure DevOps.

Product Engineer - Data Migration

Aviva - Oracle to Snowflake Migration

■ 2025 [Cognizant Consultant]

Building tooling to support the migration of data workloads from Oracle to Snowflake, enabling Aviva's transition to a modern cloud data warehouse platform.
Technologies: Oracle, Snowflake, SQL, JavaScript, dbt.

Technical Delivery Lead UK Ministry of Defence - Defence Digital

■ 2022 - 2024 [Contino Consultant]

Mission lead for the delivery of the core components (container hosting, infrastructure, networking, security, CI/CD) of MOD's DDAP [Defence Digital Analytics Platform]. The delivery of this complex multi-tenant data platform was outcome based, and required careful balancing of many competing objectives, commercial pressures and security requirements.
Technologies: AWS, Gitlab, Jupyterlab, ArgoCD, KASM, k8s, Openshift, Terraform.

Product Engineer Automation Logic - Consultant Utilisation Optimisation

■ 2020 - 2021

Worked with AL Senior management to conceive and deliver tooling to solve the consultancy's unique scheduling challenges. For this project I built a new web application, serverless functions, and a trello plugin, using Google Cloud Platform's Firebase service.

Product Engineer - AI/ML Cognizant - Virtual Scrum Master (Pre-sales)

■ 2025 [Cognizant]

Built a pre-sales demonstration application for a virtual scrum master that can dial into calls using OpenAI's Realtime API, run scrum ceremonies, update JIRA tickets, and maintain context about previous meeting topics using vector storage for long-term memory.
Technologies: Node.js, Python, OpenAI Realtime API, JIRA API, FAISS.

App Migration Consultant UK Gov - Ministry of Justice - CJSE

■ 2020 - 2021 [Automation Logic Consultant]

Worked in a multi-vendor team to migrate the UK's crown court records portal from UKCloud to AWS & Azure. The project was unusual in that it required a lift and shift approach to one cloud provider, and redevelopment and modernisation in another. My role here is to ensure the safe transfer of production infrastructure, apps, and service from the incumbent vendor to a new service run by Automation Logic.
Technologies: AWS, Azure, .NET, C#, Windows 2003, Windows 2019, Terraform.

Senior Consulting Engineer UK Gov - Her Majesty's Prison and Probation Service

■ 2020 [Automation Logic Consultant]

Short engagement to deliver automated Azure Kubernetes platform automation, working with civil servant architects to implement build and release management best-practices and good IaC development patterns.

DynamoDB), Docker, LibreOffice.

Product Engineer - AI/ML Cognizant - Consultant Matching RAG System

■ 2024 - 2025 [Cognizant]

Built a vector database RAG system for intelligently matching consultants to job roles based on skills, experience and availability. The system uses semantic search to find the best consultant matches for incoming project requirements.
Technologies: Python, FAISS, LangGraph.

Lead Product Engineer Automation Logic - Employee Engagement

■ 2020 - 2021

Led a team of 6 developers to conceive, design, implement and support a new data analysis, visualisation and alerting tool to allow AL senior leadership team to much more quickly notice when conditions onsite at a client change, improving customer and engineer retention. It was my job to connect the vision of the product owner to the abilities and motivations of a diverse group of developers in a challenging timescale. The project was delivered in 10 weeks and has run in prod for 6 months without any maintenance or downtime.
Technologies: Google Cloud Platform, Bigquery, Firestore, Slack SDK, Google Data Studio, Google Cloud Run, python, terraform

Outcome Manager UK Gov - Home Office

■ 2019 [Automation Logic Consultant]

Responsible for management of the delivery of the Border Crossing app migration project, specifically the workstream to move OFFICIAL workloads from on-prem to a new centrally-managed AWS kubernetes platform. I planned the project at JIRA 'epic' level, with team leads reporting to me. My engineering

This application allows AL management to track engineer placement, see current engineer utilisation, *and predict future utilisation based on data* from client engagement teams, helping the SLT improve profitability and reduce delivery risk.

Technologies: Google Cloud Platform, Firebase, Firestore, Trello SDK, node.js, frontend javascript

Data Visualisation & API Developer

UK Gov - Homes England

■ 2019 [Automation Logic Consultant]

At Homes England, our small team built data pipelines to collect company ownership data and join it with financials in order to calculate the government's exposure to private home building companies.

As part of this, I worked with a web design consultancy to turn their visualisation designs into pixel-accurate, reusable, testable D3.js components. I built tooling to allow designers to test their components with the full range of data, exposing design flaws early in the process.

Click here to see an interactive demo of one of the D3.js components (not if you printed this off, obviously; I'm not *that* good)

Azure Virtual Desktop Tech Lead

Lloyds Banking Group

■ 2018 [Automation Logic Consultant]

Led small team in the development of processes and automation to support the migration of 3000 VDI VMs from on-prem to Azure.

Technologies: Azure, VMware, Powershell, Jenkins and Terraform.

Private Cloud Engineer

Deutsche Bank

■ 2015 - 2017

Designed, developed & implemented a proof-of-concept HP Cloud Service Automation system for DB's internal 'cloud broker' type internal service;

Translated DB strategic direction into an actionable development plan, and managed the execution of that plan to completion in concert with two other consultants;

Created a node.js library for automated

Senior Consulting Engineer - Azure

Codehouse Group

■ 2019 [Automation Logic Consultant]

Worked with the codehouse development team to industrialise their Azure / Sitecore deployments, to deliver zero-downtime feature updates, as well as high service resilience through better use of Azure services.

Tech Lead / Client Principal

UK Gov - DEFRA

■ 2018 [Automation Logic Consultant]

Led onsite team of 7. Responsible for setting up the Azure platform support function from scratch, implementing service desk processes, and delivering multiple development team's platform build and release automation needs during the time-critical EU Exit program, in readiness for Brexit date.

Technologies: Azure, Azure Devops, Octopus Deploy, ARM templates, node.js

Infrastructure Automation Developer - Private Cloud

BNP Paribas

■ 2014 - 2015

Integrated BNPP's internal **.NET MVC & HP Operations Orchestration Private Cloud** site with production systems management/monitoring tools (Nimsoft/Geneos)

Integrated React for process status alerting component

Integrated jQuery Pjax library with existing

background allowed me to easily understand the interdependencies inherent in the delivery of a compute platform, allowing me to organise the work effectively.

Senior Consulting Engineer - Azure Virtual Desktop

Lloyds Banking Group

■ 2018 [Automation Logic Consultant]

Led small team in the development of processes and automation to support the migration of 3000 VDI VMs from on-prem VMware to Azure, using Powershell, Jenkins and Terraform.

R&D Tech Lead - [AWS/Azure Cloud Platforms]

Automation Logic

■ 2017 - 2018

Led team in pre-sales technical development work, implementing a custom application testing pipeline toolset (in VSTS/Azure Devops), playing a major role in winning the DEFRA contract, Automation Logic's largest client at the time.

Infrastructure Automation Designer - Private Cloud

Lloyds Banking Group

■ 2012 - 2014

Responsible for driving Lloyds Banking group towards devOps-style infrastructure automation, operating within a silo'd department structure. Technical lead for development of the group's first private development cloud, using HP Operations Orchestration.

Designed and developed LBG's second

testing of HP CSA private cloud services, for use in a new continuous integration process.

.NET MVC code base for huge UI performance improvements;
Integrated BMC ADDM discovery system into the server deployment process & the private cloud UI;
Provided HP Operations Orchestration training.

award-winning private cloud implementation, which delivers **full-scale route-to-live and production service** for Windows/Linux/AIX deployments. Technical lead on the project to add CPU/RAM/disk volume 'flex' capability
Design and development of automated internet-facing 'secure-zone' linux deployment capability.

Senior Infrastructure Developer - Windows Server Build & VMware

Lloyds Banking Group

■ 2010 - 2012

Design, Development, Delivery, Training, Maintenance and Support of Windows Server (2003/2008 R2) build deployment services into the new combined bank. Delivering a **cost saving of over £400,000 since integration** in licensing alone - not counting the actual engineer time saved. Over **ten-thousand fully automatic windows server builds** performed over 7 years. Also, vmware Infrastructure Support, Automation and custom tool development.

Windows Infrastructure/Support [Edinburgh & Glasgow Contracts]

Direct Line Financial Services & Intelligent Finance

■ 2001 - 2003

On-site Microsoft server support. Migration from Netware to Windows 2000.

Technical Infrastructure Developer HBOS plc.

■ 2006 - 2010

Design, Development, Delivery and Support of in-house written, end-to-end server build deployment toolsets. Maintenance of large 3-tier ASP.NET web application (c#). Development of windows build engine, including software for hardware recognition, driver remediation, network discovery and countless software deployment packages.

Windows Server Support Halifax / Bank of Scotland

■ 1998 - 2001

Straight from college into 2nd line support of Windows 'Connect' platform. Recovering Windows NT3.51 and 4.0 based services: Exchange 5.5, SQL 7, IIS4, etc

Technical Support / Delivery National Museums of Science and Industry (NMSI)

■ 2003 - 2006

End-to-end responsibility for Windows platform of ~300 users, in a team of 6. Implemented and supported various Windows based technologies (AD, Exchange, SQL 2000)