

Homer Simpson

Principal Architect | Senior Technical Lead

Cloud Architect | Big Data & Analytics | GCP & AWS | Microservices
Customer First

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SUMMARY

- Hands-on architect and software engineer with **10+ years of experience** across backend development, cloud infrastructure, DevOps, and data engineering.
- Deep expertise in **Google Cloud Platform (GCP)** and **AWS**, including BigQuery, Dataflow, Pub/Sub, Kinesis, Lambda, and other modern cloud-native tools.
- Specialized in **microservices, serverless and event-driven** architectures supporting highly scalable, resilient systems.
- A recent highlight was when I led the end-to-end design and implementation of an **event-driven Customer Data Platform (CDP)**, serving as the single source of truth across 10+ applications and 2 enterprise CRMs. This platform enabled real-time syncing of loan application and customer data, giving brokers up-to-date insights within their CRMs—improving decision-making, business operations, and customer retention.
- **Managed a cross-functional team** of 10+ engineers, 3+ testers, and 2+ business analysts, ensuring alignment between technical execution and business goals while delivering at scale.

SKILLS

Languages:	Python as primary, C#, C, C++, Java, SQL, UNIX Shell scripting, HTML 5, CSS
Frameworks:	Django, Flask, Twisted (TCP/UDP), .NET, AngularJS, Apache Beam, Apache Airflow
Day-to-day:	GCP/AWS, Docker, CI/CD, IaC (Cloudformation/Terraform), automation and monitoring
Approaches:	Agile/Scrum, Value Stream maps, hands-on technical/non-technical leadership
Technologies:	Microservices, APIs, event driven architecture, design patterns, containerization, automation and infra-as-code
Tooling:	GitHub, Bitbucket, Gitlab, Jira, Confluence and others
Testing:	TDD, Unit, Selenium, Stress Testing (Cucumber) and others

CERTIFICATIONS

AWS:	Solutions Architect Associate
GCP:	Introduction to Generative AI

WORK EXPERIENCE

REA Group - Principal Engineer/ Tech Lead, Melbourne

JAN 2022 - PRESENT

REA Group is a leading digital property company in Australia and abroad, with a strong focus on transforming the way people engage with real estate through innovative, data-driven platforms. REA delivers intelligent property estimates and market analytics that empower consumers and professionals alike.

Responsibilities: My role is split between technical leadership and people leadership. **I lead a team of 12 engineers**, providing mentorship, driving delivery, and ensuring alignment with business objectives, while also contributing **hands-on as an individual contributor (IC)** across system design and architecture. I'm responsible for building, testing, releasing, and maintaining scalable real-time data integrations across REA's Financial Services. These initiatives have improved data accuracy, system interoperability, and accelerated product delivery, **powering a platform with over 10.8 million unique visitors monthly**. I work closely with cross-functional stakeholders to align data strategy with product goals, ensuring seamless collaboration across teams.

Technology Landscape: **500+ engineers across 20+ cross-functional teams** (covering web, mobile, platform, security, and data engineering), and supporting a landscape of ~110 microservices. The architecture leverages **AWS (Lambda, Kafka), GCP (BigQuery, Dataflow, Datastore), Docker, Terraform, Bitbucket, Tableau**, and a modern data lake.

Key contributions:

- **Reported directly to the Executive Manager**, partnered with security team, lead devs and delivery leads to **empower and adopt DevOps, security-first, cloud-first culture** to support 1000+ deployments a month across 100+ microservices
- **Led the end-to-end architecture and implementation of real-time customer profiling** pipelines using **BigQuery, Dataflow, and Cloud Functions**. This enabled customer de-duplication and unique identity resolution, significantly **improving data accuracy and consistency** across systems. The solution **empowered targeted marketing and retention strategies**, supporting multiple customer-facing products.
- **Designed and implemented** event-driven integration layers between major platforms (e.g. **HubSpot, Dynamics**) using **Pub/Sub, Cloud Datastore**, and serverless infrastructure — significantly improving system interoperability and data consistency.
- **Partnered with enterprise architecture**, security, and platform teams to **promote secure, cloud-native solutions** on GCP and AWS, **reducing infrastructure provisioning time by 40%** and **improving security posture** through automated compliance checks—paving the way for faster rollout of next-gen financial products.
- **Recognized the need for in-house expertise to manage and extend HubSpot**, a core platform for broker engagement and loan pipeline visibility. **Designed and led the hiring process, conducting 15+ interviews** for Senior DevSecOps/Platform Engineers and HubSpot Solutions Architects. **Successfully trained a team of 4 key specialists** who architected and delivered new features, helping brokers better manage loan pipelines and access performance reporting—**driving data-informed growth and proactive retention strategies**. Provided **ongoing mentoring and career coaching**, focusing on **skills development, technical depth, and strategic thinking**.

- **Introduced several** mainstay technical concepts including Trunk-based Development, TDD, behavioural testing —resulting in faster release cycles (**reduced by 30%**), improved code quality, and higher team confidence in deploying changes to production.
- Run **cost optimization** initiative every quarter **resulting in ~10% reduction of the annual bill** over several months
- **Collaborated** closely with product leadership to shape **technical roadmaps**, align delivery with market needs, and ensure business goals were met through technology.
- **Promoted engineering excellence**, innovation, and continuous improvement — empowering the team to adopt new patterns such as event-driven architecture, API-first design, and scalable CI/CD pipelines.

Mortgage Choice (Consulting for Shine) - Senior Data Engineer, Sydney

AUG 2020 - JAN 2022

Mortgage Choice is one of Australia's leading mortgage broker networks, helping Australians find the right home loan by comparing products from over 30 lenders

Responsibilities: I **owned the architecture, development, and maintenance** of a customer data lake in GCP, using **BigQuery, Dataflow, and Pub/Sub** to unify data access and support advanced analytics. I led the design and scaling of Dataflow pipelines and implemented secure access via Google OAuth and Cloud Functions, ensuring critical workflows ran smoothly. I also **drove the CI/CD strategy** with TeamCity, **improving deployment reliability and speed across 30+ services**. Alongside this, I managed sprint planning and coordination with cross-functional teams, keeping engineering efforts aligned with business goals.

Technology Landscape: **5 teams** comprising **50+ engineers**, managing **~30 applications** built on **.NET** and deployed across **on-premise Microsoft servers** and **Google Cloud Platform**. Leveraged **BigQuery, Dataflow, Datastore, Pub/Sub, Cloud Storage, Google OAuth**, and **Identity-Aware Proxy** for scalable cloud solutions. Employed **TeamCity** for CI/CD and designed **data engineering pipelines** using **Dataflow**.

Key contributions:

- **Led end-to-end delivery of multiple initiatives**, collaborating with **product owners** and **stakeholders** to define scopes, gather requirements, and set project plans, ensuring successful execution and alignment with business goals.
- **Revamped the data architecture by designing and deploying a scalable data lake in BigQuery** using **Dataflow pipelines, Cloud Storage, Pub/Sub**, and **Cloud Functions** transforming fragmented data collection into a unified, high-performance system. This solution **ingested ~2,800 tables daily**, enabling unified **reporting and advanced analytics** for business insights.
- **Received commendation** from the support team for **developing a Google OAuth authentication proxy** using Identity-Aware Access, which **streamlined access to customer data**. This system **reduced L3 tickets by 30%**, significantly improving the support team's efficiency compared to the previous fragmented approach.
- **Led the integration of an automated lead allocation system** across multiple teams, significantly **enhancing the speed and accuracy** of lead distribution. This initiative was critical in **reducing response cycle time by 40% and increasing lead volume by 25%**, moving away from a previously manual, ticket-based system.

- **Addressed and resolved multiple initiative** delivery challenges, overseeing projects from start to finish. **Collaborated with product owners and key stakeholders** to ensure alignment and **gather critical requirements**, which was essential in setting clear project scopes and execution plans for successful delivery.
- **Introduced and drove “Platform Safety Roadmap”** to improve documentation, CI/CD workflows and health metrics **across 30+ services, coordinated work in a team of 15+ people**

Denon (Sound United) - Senior Software Engineer, Sydney

JUL 2017 - AUG 2020

Denon, part of Sound United, is a global leader in high-fidelity audio and home entertainment, renowned for combining cutting-edge technology with rich sound heritage.

Responsibilities: Architected and deployed scalable cloud solutions on AWS to integrate legacy proxy systems with voice assistants like Alexa and Google. Developed automated CI/CD workflows to streamline code integration, testing, and deployment. Implemented infrastructure as code, secure networking configurations, and role-based access controls. Built comprehensive monitoring and logging solutions using AWS-native capabilities and supported long-term data storage and alerting.

Technology Landscape: **4 teams** comprising **30+ engineers** delivering end-to-end **voice and music streaming solutions** across **cloud, mobile, and embedded platforms**. **Cloud integration** built on **AWS** using **Python, Redis, and DynamoDB**, with CI/CD and **infrastructure as code** for scalable deployments. Real-time data pipelines implemented on AWS using **API Gateway, Kinesis, Lambda, DynamoDB, and Elasticsearch**. Developed companion Android and iOS apps for controlling audio devices and streaming services.

Key contributions:

- **Architected and deployed scalable cloud solutions on AWS** to integrate legacy proxy servers with Alexa and Google voice services, improving connected device functionality and expanding smart home capabilities.
- **Designed and implemented a real-time device telemetry pipeline using API Gateway, Kinesis, Lambda, DynamoDB, and Elasticsearch**, creating a centralized data lake for logs; enabled proactive monitoring through Kibana dashboards, **reduced issue detection time by 60%**, and significantly improved end-user experience by identifying and resolving device issues faster.
- **Built and managed CI/CD pipelines** to automate build, test, and deployment processes, **reducing release cycle time by 40%** and improving engineering velocity.
- **Implemented infrastructure as code** to standardize cloud environments across development and production, **enhancing system reliability** and **reducing manual provisioning** errors.
- **Monitored and optimized production systems** through custom dashboards, alarms, and logging, **reducing incident resolution time by 30%** and improving operational visibility.
- **Designed and developed an asynchronous TCP server using Python (Twisted framework)** to **enable low-latency communication** for real-time music streaming.
- **Engineered secure network topologies** including isolated subnets, routing tables, and internet gateways to safeguard critical infrastructure and enforce traffic control.

If you have many clients you can do it this way:

Leading technology consulting org specializing in innovative cloud solutions and digital transformation.

Responsibilities: Led the implementation of high-quality cloud solutions, focusing on operational stability and streamlining all areas of development, release, and operations. Led several projects to modernize infrastructure using Google Cloud best practices and automate projects using Cloud Build, GitHub and Terraform. Coordinated several successful migration projects from legacy Apigee environments to Apigee X, reducing turnaround time significantly. Collaborated effectively with on-site and up to ten remote team members across various departments and stakeholders to meet project goals.

Client: Endeavour Energy

- **Led the infrastructure team of a cutting-edge project** to automate Endeavour Energy's electricity meter reading systems, leveraging **AI and cloud technologies** to enhance operational efficiency and accuracy. Built a **CI/CD pipeline** on GitLab for automated meter reading systems and managed the deployment of **visual classification models** on Google Cloud, ensuring an optimized and standardized environment.
- **Worked closely with Endeavour's data science team** and operations managers to ensure the solution met both technical requirements and business needs, facilitating efficient and secure deployment processes.
- **Technologies Used:** GitLab, Google Cloud, Vertex AI

Client: Foodstuffs North Island

- Conducted a **comprehensive assessment** of Foodstuffs North Island's API management platform, focusing on Apigee implementation challenges and future strategies.
- **Led discovery workshops** to identify key pain points in the Apigee Hybrid setup, including automation, maintainability, and production readiness issues.
- **Analyzed and compared** Apigee Hybrid and Apigee X, recommending migration with detailed architecture design, implementation plan, and TCO estimations.
- Led collaboratively with **cross-functional teams** to ensure the proposed solution met technical and business requirements, providing strategic guidance on cloud optimization, potentially **saving over \$1 million** in operational costs over three years.
- **Technologies Used:** Apigee, AWS, Google Cloud

Client: Macquarie Group

- **Led a critical initiative** to modernize Macquarie's API management infrastructure, transitioning from legacy Apigee environments to Apigee X. This strategic move significantly **enhanced system scalability and reduced operational costs**.
- Automated the configuration migration process from Apigee MPC to Apigee X, **reducing migration time from several days to less than ten minutes** and accelerating project delivery time by several months.
- **Facilitated collaboration with various stakeholders**, including platform and security teams, to ensure all requirements were met and also implemented best practices for configuration management such as **single source of truth** configuration storage and **secure secrets storage**.
- **Technologies Used:** Apigee, Bamboo, GitLab, Google Cloud, NodeJS, Shell Scripting

EXTENDED CAREER HISTORY

Web Services Developer, Sydney
IT Solutions, Web Developer, Expeditious
Research Assistant, University of Melbourne

JUN 2014 – JUL 2017
MAR 2015 – APR 2015
APR 2013 – MAR 2015

EDUCATION

Bachelors of Engineering, Software (Grade: First Class Honours 77%)
University of Melbourne, Parkville, Victoria

2009 - 2013

HOBBIES AND INTERESTS

- **Outdoors:** Long drives, hiking, and exploring new dinner spots (Rocks Café in Bali was a standout, and watching the moonrise at Manly Beach was unreal—highly recommended.)
- **Sports:** Cricket enthusiast (Favourite team - India & Australia), squash and roller skating (district champion)
- **Technology:** Passionate about building automated crypto trading systems with millisecond latency