

# Jerome Lieow

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Multi Cloud and Kubernetes Certified Solution Architect at Cloud Mile, an MSP delivering multi cloud services. 4 YOE in full stack development. 4 YOE in Cloud/DevOps/Platform.

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## PROFESSIONAL EXPERIENCE

### **Solution Architect – Cloud Mile Pte Ltd**, Singapore, Jan 2024 – Current Position

- Perform discovery to understand customer's business goals and provide appropriate technical solutions and architecture designs.
- Build POCs to demonstrate capability and value.
- Perform architecture reviews in accordance to the Well Architected Framework to improve security, increase operational efficiency, optimize customer expenditure and identify resources susceptible to disruption.

### **Senior Solution Engineer – Cloud Mile Pte Ltd**, Singapore, Jan 2023 – Dec 2023

- Architected and implemented a Hub and Spoke architecture on AWS which centralizes ingress, egress, inspection and logs, deployed via GitOps using Terraform.
- Designed and implemented data pipelines with cloud native solutions and ISVs such as Snowflake, Fivetran and Twilio.
- Implemented GitOps on GitHub using Terraform, providing a team of 10 engineers a centralised platform to provision cloud resources on AWS and Azure. This has strengthened least privilege access and provides a traceability record for deployments.
- Developed ChatOps on Slack with GCP cloud functions using TypeScript, which provides 15 developers across 3 teams with a self-service method to provision infrastructure to multiple cloud service providers.
- Built a Python3 tool, Terraform Manager, extending the Terraform CLI to standardise and enforce a code structure, improve knowledge/documentation management and onboarding of new engineers.
- Set up and deployed Ansible to manage VM and container configurations across environments and peered networks and integrated it with Hashicorp Vault for secret management.
- Self-hosted dev tools such as GitLab, Mattermost, DependencyTrack, DefectDojo, HashiCorp Vault, and PostHog on VM and serverless infrastructure.
- Automated the tagging strategy and instrumentation of applications across AWS and Azure with DataDog using Terraform.
- Provide training and mentorship for new hires and customers.
- Conduct interviews to assess the qualifications and fit of potential candidates.

### **Associate Lecturer (CSIT 242 - Mobile Application Development) – SIM University**, Singapore, Jan 2022 – Mar 2022

- Setting course assignments and conducting lectures.
- Conducting all forms of assessment and evaluation required by the institution.

### **Solution Engineer – Cloud Mile Pte Ltd**, Singapore, Aug 2021 – Dec 2022

- Responsible for implementing and securing multi-cloud (GCP, Azure and AWS) landing zones.
- Familiar with implementing and securing CICD pipelines on GitHub and GitLab.
- Support SEA regional sales teams during client calls, by delivering and demonstrating proof of concepts, fronting technical queries and preparing demos.
- Support customer success team by providing L1 to L3 technical support and training materials.
- Increased company product offerings by attaining technical verification/certifications.

### **Air Force Engineering Officer (Avionics) – Republic of Singapore Air Force**, Singapore, Jan 2017 – Aug 2021

- Responsible for the airworthiness of the avionics and electrical system of the F-15SG, AH-64D and S-70B.
- Led multiple teams in country and overseas to provide maintenance support and recovery for AH-64Ds.
- Android Application Developer for the Republic of Singapore Air Force. Developed multiple Android Applications used for Transport Approvals and Contact Tracing. See "Software Development Projects" section.

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## SOFTWARE PROJECTS

### **Terraform Manager (Python)**, Nov 2022 – Present,

- Adds the ability to perform targeting of Terraform resources and modules within and across projects via YAML files improving documentation.
- Integrates environmental variable loading keeping commands used to build multiple environments consistent, reducing human errors.
- Automated update and installation via Homebrew and Scoop on GitHub.

### **Competencies (Purpose)**

- Python3
- Terraform

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**SwiftCDA (Android), May 2021 – Aug 2021,**

- Android mobile application which disables Android Phone cameras and monitors attempted use of the camera function within a defined GPS perimeter.

**Competencies (Purpose)**

- Android Studio, Java (Mobile Development)
- Firebase (Authentication and Database)

**SwiftTest (Android), Apr 2020 – Dec 2020,**

- Android mobile application to manage COVID-19 swabs. Features include:
  - OCR for scanning Identity Card, Barcode Code 39 and QR code to quickly generate a label with the patient's full Name, NRIC and date of birth.
  - Wireless Bluetooth printing via a Brother Label printer QL-820NWB.
  - Storage of patient details in a cloud database.
  - A QR code generator webapp was developed to aid in the scanning.

**Competencies (Purpose)**

- Android Studio, Java (Mobile Development)
- Firebase (Authentication and Database)
- React (Website)

**SwiftMED (Android), Feb 2020 – Aug 2021,**

<https://play.google.com/store/apps/details?id=com.swiftoffice.swiftmed>

- Android mobile application designed to facilitate contact tracing with TraceTogether through Bluetooth for the COVID-19 virus. Features include:
  - A health declaration and temperature taking feature
  - Telemedicine using third party libraries
  - A COVID-19 Symptom Checker in collaboration with the National University of Singapore, Ministry of Health Singapore and National Centre for Infectious Diseases for data analytics.

**Competencies (Purpose)**

- Android Studio, Java (Mobile Development)
- Firebase (Authentication, Database and Push Notifications)

**Military Transport Risk Assessment Mobile Application (Android), Individual Project, Nov 2016 – Jul 2017 (<https://github.com/jlieow/MTRAC>)**

- Android mobile application to allow the submission, assessment and approval of a transport operator's risk assessment form before the start of each journey with push notifications and database archival.

It was awarded the Chief of Defence Coin for being the Singapore Armed Forces first successful mobile application. Notable Mention:

<https://www.facebook.com/watch/?v=1790515461041705>

**Competencies (Purpose)**

- Android Studio, Java (Mobile Development)
- Firebase (Database and Push Notifications)
- Google Maps Platform (Submitting API requests to retrieve addresses)
- Outsystems (Database)

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**CERTIFICATIONS**

[Certified Kubernetes Administrator](#)

[GCP Professional Cloud Architect](#)

[GCP Professional Cloud Developer](#)

[GCP Professional Google Workspace Administrator](#)

[GCP Professional Cloud DevOps Engineer](#)

[GCP Associate Cloud Engineer](#)

[GCP Looker LookML Developer](#)

[Certified ScrumMaster](#)

[Certified Scrum Product Owner](#)

[Snowflake SnowPro Core](#)

[Azure Solutions Architect Expert](#)

[Azure DevOps Engineer Expert](#)

[Azure Developer Associate](#)

[Azure Data Engineer Associate](#)

[Azure Network Engineer Associate](#)

[Azure Security Engineer Associate](#)

[Azure Administrator Associate](#)

[DataDog Technical Specialist Certification](#)

[AWS Certified Solutions Architect – Professional](#)

[AWS Certified DevOps Engineer – Professional](#)

[AWS Certified SysOps Administrator – Associate](#)

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**LANGUAGES**

English – Native Speaking and Writing Proficiency

Mandarin (Simplified Chinese) – Conversational Speaking and Writing Proficiency

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**EDUCATION**

University of Manchester, Manchester, United Kingdom

MEng in Electrical and Electronics Engineering, 2013 –2016