

Tremain Wales

Software Engineer | Hybrid or Remote Roles | Willing to Relocate

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EXPERIENCE

Software Engineer (DevOps)

📅 Nov 2022 — Present

EnergyFlex

📍 Brisbane, QLD

- Engineered a **serverless** ETL pipeline for banking data, with an **event-driven architecture**, ensuring real-time metrics calculation and data deletion – in compliance with CDR regulations.
- Implemented secure, automated **GitLab CI/CD** pipelines utilizing **AWS OIDC**, including release notes from JIRA tickets, targeting sub 15 minute lead time for changes.
- Developed a **GraphQL** API in **TypeScript**, consolidating **DynamoDB** and **PostgreSQL** data sources. Deployed on **AWS Lambda** behind **API Gateway** and **WAF**, with **Auth0** for auth.
- Developed a generative LLM chatbot using **Azure ML Studio** and **Python**, featuring session history and rate limiting.
- Deployed AWS infrastructure (**VPC**, **Route53**, **WAF**, **Cloudfront**) with **Terraform IaC** and environment specific S3 backend.
- Configured AWS multi-account organization with **SAML 2.0** and **Microsoft SSO** (Azure AD) for streamlined identity federation, securing access through **IAM** roles and user groups.

PROJECTS

FiremanSAM

📅 2023

Fine-tuned Meta AI Research's **Segment Anything Model (SAM)** using multispectral satellite data for the burned area delineation task. Resulted in a **vision transformer (ViT)** based model that could competently segment an image into burned and non-burned areas based on post bushfire imagery only. Achieved by freezing the weights of the image and prompt encoders, and fine-tuning only the SAM mask decoder. [FiremanSAM Git Repository](#).

Chatterbox TTS

📅 2022

Designed, implemented, and deployed a scalable **text-to-speech** web application that accepted text input and synthesized audio output for hundreds of concurrent users. Served REST requests using multiple dockerised **Flask** application instances behind an **AWS ELB**. Used an **SQS Queue** with **Celery** worker instances for asynchronous text processing. Deployed using **Terraform (IaC)** onto **AWS EC2**.

Home Server

📅 2021 — Present

Built and maintain my own home server running **Nginx** secured with **letsencrypt** for hosting a variety of gameservers, file hosting, and a personal VPN. All applications are containerized.

AWARDS

2017 Recipient, UQ Young Achiever's Scholarship

2017 Recipient, UQ Link Scholarship

SKILLS

Programming Languages

- Python
- Typescript/Javascript

Libraries & Frameworks

- AWS SDK • Pandas • Polars
- PyTorch • NextJS • Prisma
- Node.js • Jest • Artillery

Tools

- Gitlab CI/CD • Git • Nginx
- Confluence • Auth0 • Bash
- Terraform • Docker • Jira
- GraphQL • ChatGPT • SAM
- Typst • Docker Compose

AWS

- DyamODB • Lambda • S3 • IAM
- Route 53 • API Gateway • WAF
- Cloudtrail • SES • SNS • SQS
- Cloudfront • VPC • RDS • EC2
- Eventbridge • Step Functions

EDUCATION

B.Eng. (Hons)

📅 Nov 2023

Software Engineering

University of Queensland

Courses

- Software Architecture
- Cloud Computing
- Machine Learning
- Data Mining
- Algorithms and Data Structures

REFERENCES

Andre de San Miguel

Senior Software Engineer

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INTERESTS

Headphones • Factorio • VR
3D Modelling • Homelab • LLM
Keyboards • Cycling • Drums