JOSHUA WEE

joshuawee05@u.nus.edu | [Linkedin](#) | [GitHub](#) | +1 (669) 977-1825
Internship Available: Aug 2025 - Apr 2026; Obtained US FTE Work Authorization

EDUCATION

National University of Singapore (NUS)   **Graduating May 2026**
BS. Computer Science   *Singapore*

SKILLS

Languages: *Python, Java, JavaScript, TypeScript, R, HTML, CSS*
Technologies: *AWS Suite(S3, EC2, CloudWatch, Lambda, SNS, EKS)*, Argo, Docker, Kubernetes, PySpark, Jest, React, Kafka, Sentry, LLM APIs
Libraries: *pandas, Dash, NumPy, Plotly, Scikit-learn*

EXPERIENCE

Software Engineer   Aug 2024 – Jul 2025
Mitra Chem, Data Platform Team   *Mountain View, California*

- **Productionized a large-scale ML feature engineering pipeline for 3.5TB+** of high-volume experiment data, reducing **memory footprint by 90% and improving data retrieval performance by 10X.** *(Python, PostgreSQL, CloudWatch, S3, Kubernetes, Argo, SNS)*
- **Co-created a Data Audit Engine** that automatically flagged anomalies (e.g., missing fields, outliers) across all experiment data pipelines, provided **fix recommendations, and accelerated analytics workflows by 5X** *(Python, Microservices, SNS, Argo, Kubernetes)*
- **Developed a Statistical Quality Control (SQC) system for monitoring equipment and process anomalies** that was adopted as the standard monitoring tool for experiment data streams and used in weekly operational reports. *(Python, Dash, Plotly, PostgreSQL)*
- Designed and implemented an **anomaly detection and alerting system for experiment result workflows,** shifting lab teams from **reactive issue resolution to proactive monitoring** through Slack-based alerts. *(Python, Grafana, Sentry, CloudWatch, PostgreSQL)*
- Created customizable dashboard modules for tracking operational KPIs across various test parameters, **boosting workflow productivity by 45% for scientists and business teams.** *(Python, Dash, PostgreSQL)*
- Authored runbooks and automated incident response workflows, **reducing on-call debugging time by 1.5 hours bi-weekly and improving onboarding efficiency for 5+ engineers.** *(Python, Kubernetes, Confluence)*

Software Engineer   Jan 2024 – Jun 2024
NUHS, AIO Innovation Office   *Singapore*

- **Unified event sourcing from 2000 active users** for email and WhatsApp notifications to be used downstream for micro-services *(Kafka, Python, PostgreSQL, Node.js)*
- **Created Lambda data processing service** that transforms over **100,000 records every day** and exposed downstream to various microservices *(Python, Lambda, S3, CloudWatch)*
- **Integrated testing utils to improve end-to-end testing time by 2X** with orchestrated parallel testing *(Jest, React, Node.js)*

PROJECTS

HawkerTrails | *React, BrightData APIs, Kafka, Supabase, Typescript, Python, LLM(Gemini)* | GitHub   *Present*

- AllTrails for Hawker Centres/Food Courts. AI-powered app for hawker centres and food courts that provides updated directories of stalls' opening hours, menu and reviews to improve data accessibility, accuracy and organization, aiding FnB discovery