

DR. LEE PEI SHYUAN

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SUMMARY

Data and technology professional with 8 years of cross-sector experience spanning government data transformation, data governance, data management, analytics, IT operations and cybersecurity advisory - with a hands-on background in data science and analytical modelling. Currently serving as Senior Lead for Data Governance, Operations and Analytics - owning the organisation's governance frameworks, data standards and project governance agenda at the C-suite level. Also oversees technical teams across Systems, IoT, Product Design and Quality Assurance, while driving executive analytics that shapes commercial and operational decisions. Led Sarawak Government's data management initiative across 12 ministry groups, facilitating 50+ workshops and training 700+ data officers in data governance, management and data proficiency practices - contributing directly to the realisation of PCDS 2030 and SDE 2030 digital transformation agendas. Brings deep expertise in DMBOK, ISO 8000, ISO 27001 and ISO 9001 frameworks, hands-on cybersecurity advisory for the aviation sector, and end-to-end delivery across ETL pipelines, cloud and on-premise infrastructure, Power BI and databases. Adept at translating complex data landscapes into actionable insights for senior leadership. PhD researching financial crime detection using machine learning applied to UK stock market. Certified Data Management Professional (CDMP) from DAMA International.

WORK EXPERIENCE

Operations & Data Manager, Karuna (Sarawak) Enterprise Sdn Bhd, Sarawak

08/2025 - Present

- Developed cybersecurity and compliance policies aligned with ISO 27001 and IATA regulatory requirements for a Sarawak aviation client, conducting risk assessments on system integration, data security, fraud exposure and vendor compliance.
- Spearheaded compliance transformation initiatives across data governance, operations and analytics, translating regulatory requirements and strategic priorities into actionable compliance frameworks and delivery roadmaps.
- Served as governance and risk advisor to senior stakeholders across business and technical functions, balancing regulatory obligations, risk exposure and operational constraints to inform sound organisational decisions and present compliance reports to senior management.
- Established internal compliance guidelines and standards aligned with ISO 27001, ISO 9001, DMBOK and ISO 8000, delivering compliance training programmes to embed regulatory awareness, quality management and data security practices across cross-functional teams - reducing compliance and project risks while driving a culture of accountability.
- Engineered analytical operating models and governance practices that enhanced performance visibility, decision quality and commercial outcomes.
- Collaborated with various departments to ensure seamless integration of governance practices into daily operations, overseeing ETL pipelines on Azure Data Factory, cloud and on-premise infrastructure management, and analytical reporting via Microsoft Power BI.

Data Management Specialist, Sarawak Information Systems Sdn Bhd, Sarawak

08/2024 - 07/2025

- Championed a state-wide public sector compliance and digital transformation initiative, contributing to the establishment of Sarawak's government data management, sharing and compliance system.

- Conducted data maturity assessments across 12 ministry groups, facilitating over 50 workshops to diagnose governance readiness, advise on operating models, standards and transformation roadmaps.
- Orchestrated capability-building initiatives, coordinating with cross-functional team members to train over 700 government data officers in compliance, data governance and data management practices.
- Instituted compliance policies, governance artefacts, standards and onboarding processes across 12 ministry groups, enhancing data quality, regulatory consistency, interoperability and long-term sustainability.
- Acted as the primary liaison between policy stakeholders, regulatory teams, technical teams and end-users to drive governance adoption and address data management queries.

Data Scientist, Sarawak Information Systems Sdn Bhd, Sarawak

06/2021 - 08/2024

- Conducted comprehensive business and data requirement studies, translating client needs into effective solution designs, risk mitigation strategies and analytics approaches.
- Developed data consultancy reports, project proposals, effort estimates and delivery schedules to support client engagement and scoping.
- Led proof-of-concept initiatives in machine-learning-based fraud detection and financial crime identification, overseeing both compliance investigation design and technical delivery.
- Designed and delivered BI dashboards, compliance training materials and workshops for client organisations.
- Served as a key liaison between clients and internal delivery teams, ensuring solution quality and regulatory alignment.
- Mentored data engineers, AI engineers and BI developers across multi-domain projects, spanning business areas such as land and survey, agriculture and livestock development.

Data Analyst, FatHopes Energy Sdn Bhd, Selangor

09/2019 - 05/2021

- Enhanced operational efficiency and revenue assurance through data-driven analysis across 13 depots in Malaysia and Singapore.
- Led digitalisation initiatives that transitioned from manual tracking to IoT-enabled monitoring systems, improving traceability and operational oversight.
- Designed and directed nationwide client training programmes for more than 1,000 outlets, facilitating the adoption of data and reporting solutions across multinational fast-food franchise operations in Malaysia and Singapore.
- Developed dashboards and reports for internal management and multinational clients, increasing operational visibility and consistency.

SKILLS

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|---|---|
| • Regulatory Compliance & Risk Assessment | • Governance Reporting & Stakeholder Liaison |
| • Governance & Standards Monitoring | • ISO 27001, ISO 9001, ISO 8000 & IATA Compliance |
| • Policy Development & Standards Implementation | • Data Strategy & Roadmap Development |
| • Strategic Analysis & Problem Solving | • Requirements Analysis & Solution Design |
| • Operating Model & Process Improvement | • Business Process Analysis |
| • Data Governance & Data Management | • Decision Support |
| • Business Intelligence & Data Visualisation | • Data Modelling & Data Warehouse Architecture |
| • ETL/ELT & Data Pipeline Development | • SQL & Database Management |
| • Machine Learning & Fraud Detection | • Cloud Infrastructure (Azure) |

- Client Management
- Executive Communication & Presentation
- Training & Knowledge Transfer
- Cybersecurity & Information Security
- Project Management
- Cross-functional Team Leadership
- Stakeholder Engagement
- Financial Crime Detection

PROFESSIONAL CERTIFICATES

Certified Data Management Professional (CDMP) - Associate Level, DAMA International, Body of Knowledge
2021- Present

EDUCATION

Ph.D., Computing, Manchester Metropolitan University, UK

2013 - 2018

- Research focus included: Financial crime detection, machine learning, data and information extraction and semantic analysis.
- Developed novel methodologies for identifying potentially illegal activity on UK financial discussion boards linked to London Stock Exchange movements.
- Designed and implemented a prototype detection system to assist law enforcement in identifying fraudsters, amalgamating information extraction, moving averages and semantic similarity to pinpoint suspicious content.
- Empirically demonstrated, through semantic analysis of internet textual content, that FTSE AIM All-Share companies were 20% more likely to be targeted by fraudsters compared to FTSE 100 companies, highlighting systemic vulnerabilities in smaller-cap markets.
- Published findings in peer-reviewed international journals and presented work in the UK and Singapore.

M.Sc., Computing, Manchester Metropolitan University, UK

2011 - 2012

- Conducted research in machine learning, data mining and information extraction.

Bachelor of Business, Economics & Finance, RMIT University, AU (by Subang Jaya Metropolitan College), Selangor

2008 - 2011

- Focus areas included accounting, economics, finance and law subjects, such as Malaysian Company Law, Commercial Law and the Law of Investments and Financial Markets.

LANGUAGES

English

Fluent

Bahasa Malaysia

Fluent

Mandarin

Fluent

Cantonese

Fluent