Yeu Wen Mak

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CAREER PROFILE

I have a proven track record in distributed computing based on common object request broker architecture, distributed object caching, service/event/domain-oriented, application or microservices and data architecture, delivering enterprise solutions as high throughput, highly available and massively scalable web-based solutions handling 100s of hits per second on average, leveraging big data in evidence-based decision-making in all phases of the IT supply chain. Also, I have partnered with businesses to harness digital technologies for both operational efficiency and business effectiveness. Change excites me, especially meeting and experiencing new people and places, never hesitant to adjust plans or deadlines as needed. Others see me as energetic, animated and sociable. After having completed numerous MOOCs on data science, machine learning using Python, blockchain or distributed ledger programming and most recently machine learning at Monash College with coaching by Hudson to fine tune my go-to-market strategy, I am ready to leverage my expertise as described above to work with diverse stakeholders to scale and federate machine learning models in response to heterogeneous data sources and consumers, making this world a better place for all. To that end, I have blogged about my recent experience with quantitative finance research here In particular, I have explained why I am so passionate about algorithmic information theory and dynamics in one of my recent blogs on why statistics alone is dangerous for quantitative finance.

DATA SCIENCE SKILLS

I specialises in algorithmic intelligence based on Algorithmic or Kolmogorov Information Theory supported by
- Algorithms: Minimal Algorithmic Information Loss a.k.a Dimensionality Reduction and Features Selection
- Optimisation: Evotorch Genetic Algorithms
- Generative Modeling: Elementary Cellular Automata
- Programming: Python, R, Java, C/C++
- Data Analysis: NumPy, Pandas, SciPy, Matplotlib, Sklearn
- Financial Models: Monte Carlo methods, Black-Scholes, Value at Risk (VaR)
- Machine Learning: Regression, Classification, Time Series Forecasting

SYSTEMS & APPLICATIONS

Instances of Enterprise Service-Oriented and Information Architecture, Distributed Grid and Peer-to-Peer Architecture, and Distributed Object Databases I have implemented are
- EA Frameworks such as TOGAF, FEAF, Zachman and Gartner's EA Framework Enterprise
- Model-Driven Architecture (UML2, MOF, CWM, EMF)
- OASIS Reference Model and Architecture for SOA
- IT Governance using COBIT framework
- Grid and distributed peer-to-peer architectures (JINI)
- Open source SOA/ESB/EDA frameworks such as ServiceMix
- J2EE frameworks such as Struts and Spring and J2EE design patterns such as MVC and Factory
- Software process and methodology such as RUP and Disciplined Agile
- Quality Assurance using CMMI framework

CAREER HIGHLIGHTS

- Architected a shared integration platform for enterprise-wide applications deployment and operational management resulting in 30+ design policies approved and enforced, and 10+ standard business services deployed at pre-defined quality of service and charged per usage per business unit
- Designed a roadmap and blueprint of next generation search engine and content management platform resulting in a SOA framework for integration established in about 2 months and FAST/Alfresco technologies prototyped and evaluated in about 3 months.
- As a researcher on possible links between agility and diversity/equity/inclusion using mixed methods research design sponsored by the Business Agility Institute, I lead the data analysis team to discover concepts and themes using automatic content analysis on interview and survey qualitative data, followed by collective abductive reasoning to make insightful and impactful conclusions for our target stakeholders

ACADEMIC QUALIFICATIONS

Course	Institute	Year Completed
Introduction to Machine Learning	Monash College	2022
Diploma of Community Services	Swinburne University of Technology	2023

Applied Data Science I: Scientific Computing & Python (with honors)	WorldQuant University	2021
Applied Data Science II: Machine Learning & Statistical Analysis (with honors)	WorldQuant University	2021
MSc in Financial Engineering	WorldQuant University	2023
Google Cloud Digital Leader	Google	2021
Customer Experience Strategy and Design	RMIT	2021

CAREER SUMMARY

Role	Name of Organisation	Employment Duration
Facilitator, Catalyst, Mobilizer	Simplexity Catalysts	2014 - ongoing
Enterprise Technical Architect	Toll Global Information Services	2007 - 2014
Shared Services Architect	Sensis Yellow Pages	2006 - 2007

Other roles listed on my Linkedin Profile at www.linkedin.com/in/linesnotboxes/

EMPLOYMENT HISTORY

Role	Name of organisation	Month Year – Month Year
Facilitator, Catalyst, Mobilizer	Simplexity Catalysts	June 2014 - ongoing

Simplexity Catalysts facilitate and mobilise community actions to create and maintain coherent, and sustainable change.

I work with stakeholders to share a common description of the presence, identify the few essential things (Pareto's Principle) we can change, leverage their interactive efforts, where we can monitor the effects of those changes, where success would be probable or failure teaches us something in a continuous improvement cycle. The primary goal is to create and sustain coherent enterprises.

I connect the dots using both synthesis and analysis while optimizing the whole rather than just the parts alone for e.g. sales to development to operations end2end even though individual function may be sub-optimal.

- As an independent machine learning researcher, I collaborate with the community of researchers at MLCollective.org and Openmined.org to review and present research publications
- As a researcher on possible links between agility and diversity/equity/inclusion using mixed methods research design sponsored by the Business Agility Institute, I lead the data analysis team to discover concepts and themes using automatic content analysis on interview and survey qualitative data, followed by collective abductive reasoning to make insightful and impactful conclusions for our target stakeholders
- As a member of Swinburne Sustainability Society, I led a feasibility study of reducing single-use plastics campus-wide
- As a member of Deakin Land-Use Futures Modelling Project, I have used the most recent climate change data to project future geographic distributions of around 10000 plant and animal species in Australia using 4 global climate models under CMIP 5 RCP 2.0, 4.5, 6.0, and 8.5 scenarios.
- As a Monitoring And Evaluation, Systems and Data Support Volunteer at the Asylum Seeker Resource Centre, I regularly reported on and reviewed the Human Rights Legal Program's impacts and outcomes
- As a member of the Access and Equity Advisory committee for the City of Kingston, I advocate for equality and equity of men and women in the disadvantaged and vulnerable communities.

Enterprise Technical Architect	Toll Global Information Services	May 2007 - Jun 2014

Toll Group is Australia's largest logistics and transport provider with about AUD$7.5 billion in revenue in 2007.

My original role was an architect with a mission to provision the next generation highly-available application technology stack (ATS) as a standard application platform for enterprise-wide applications, in a small team of about 4 members in collaboration with another small team from Infosys

- Take ownership of the platform that is based on a virtual grid architecture made up of reusable building blocks, deployed in a primary site and a secondary disaster recovery site.
- Plan, scope and execute a POC to evaluate the relative strengths and weaknesses of HP BAC suite and Oracle's EMGC product for the purpose of potentially implement service-level monitoring in the data center as only infrastructure-level monitoring is done today

- Plan, scope and architect new shared and managed hosting platforms and capability (PaaS) for shared enterprise JEE and integration solution development and deployment
- Facilitate the resolution to architectural decisions, producing a number of architectural views and standards

resulting in
- Architected a common hybrid cloud-based application and integration platform for enterprise-wide applications deployment and operational management using Oracle Fusion, Redhat, WebMethods Middleware and others
- Successfully deployed ATS into both standalone and clustered development environments, following a test-driven and continuous integration SDLC - other environments including performance, UAT, production environments provisioned across Asia-Pacific.
- Incrementally delivered a set of enterprise architectures as part of ATS deliverables while working with Toll's enterprise architects, using SOA design principles, covering infrastructure, technology, security, services, information and integration architectures In particular, Toll's common messaging and data model is based on OASIS's Universal Business Language (UBL) v2.0
- Produced 30+ design principles, guidelines, policies approved and enforced using JIRA+Confluence, and 10+ standard business services deployed at pre-defined quality of service and charged per usage
- Successfully guided and governed the development and production rollout of several enterprise solutions that are deployed on ATS environment, such as Global Freight Forwarding, B2B TradeExpres and microservices-based Track & Trace enterprise solution

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Shared Services Architect   Sensis Yellow Pages   May 2006 - Apr 2007

Sensis is a leading multi-channel search and directory company in Australia with over billions in annual revenue.

My role is to design a roadmap and blueprint of the next generation search engine and content management platform.

I am responsible for
- developing a web2.0 style software factory capability as part of its 3-year long IT strategy to re-platform key search and content technologies in use today in Yellow Pages Online division, which handles more than 6.4 million unique users monthly.
- working with development managers, enterprise architects and multiple vendors supplying architects, consultants and developers, we are mapping out a SOA framework to be deployed on a Java grid computing platform, driven by the needs of an intense competitive and dynamic marketplace.

resulting in
- Produced a SOA framework for integration established in about 2 months and FAST/Alfresco technologies prototyped and evaluated in about 3 months
- Put in place a wiki with Subversion repository backend to provide a collaborative environment for architects and laying down a shared services taxonomy that is then communicated company-wide.
- Established the OASIS Reference Model for SOA and TeleManagement Forum's Shared Information/Data Model as the foundation for the above Shared Services Architecture blueprint.
- Working with developers in a number of agile projects in search and content management technologies such as FAST and Alfresco.

LANGUAGE SKILLS

- Chinese (Mandarin and various other spoken dialects)
- Malay (commonly used in Brunei, Malaysia and Indonesia)

INTERESTS

- Volunteering
- Gardening
- Cooking

REFEREES

Referees are available upon request