

Erwin R. Pasia

E2E Data Science Architecture (Software, Data & Infrastructure)

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Auckland, New Zealand

About Me:

I am a highly motivated and results-oriented Data Science Professional with a strong background in Advanced Data Analytics, Machine Learning Engineering, and Data Engineering. Driven by a passion for unlocking insights from data, I transitioned from a successful 15-year career in the Mobile Telecommunications industry to pursue this dynamic field.

Throughout my career, I have consistently demonstrated a commitment to continuous learning. I actively seek out opportunities to expand my knowledge and refine my skills, having completed comprehensive professional training programs from Big Tech companies and specializations from esteemed universities like IBM, Google, Nvidia, Imperial College London, and Duke University. These experiences have equipped me with a deep understanding of End to End Data Science and Data Architecture, allowing me to approach complex challenges with a holistic and versatile perspective.

My expertise extends beyond theoretical knowledge. I have honed my skills through real-world projects and a diverse portfolio, showcased on platforms like GitHub, IBM Watson, and Google Collab. This practical experience allows me to effectively translate data into actionable insights, driving tangible business value.

I am a firm believer in the power of collaboration and continuous improvement. I actively seek opportunities to learn from and share knowledge with fellow data professionals, fostering a collaborative environment that fuels innovation. My strong communication and interpersonal skills enable me to effectively bridge the gap between technical and non-technical audiences, ensuring everyone is aligned with data-driven insights.

Looking ahead, I am eager to leverage my skills and experience to contribute to a team and organization that values data-driven decision making and innovation. I am confident that my dedication, adaptability, and passion for learning will enable me to make a significant impact in this ever-evolving field.

Skills & Experience

Data Engineering:

- Programming Languages: **Python, Java (Basic), Scala (Basic)**
- Databases: **Relational (IBM Db2, MySQL, PostgreSQL) & NoSQL (MongoDB, Cassandra)**
- Big Data Technologies: **Apache Spark, Hadoop, Kafka**
- Cloud Platforms: Experience with cloud platforms like **AWS, GCP, or Azure** for data storage, processing, and orchestration
- Data Warehousing & Modeling: **Data warehousing concepts, dimensional modeling, data quality management**
- ETL/ELT Pipelines: Designing and implementing data pipelines using tools like **Airflow** and **Apache NiFi**
- Version Control: **Git**
- Linux: Comfortable working in the **Linux** environment

Advanced Data Analytics:

- Programming Languages: **Python, R**
- Data Wrangling & Cleaning: **Pandas, NumPy**
- Statistical Analysis: **Hypothesis testing, Regression analysis, Time series analysis**
- Machine Learning: **Supervised learning** (*Linear Regression, Decision Trees, Random Forests*), **Unsupervised learning** (*K-Means Clustering, Principal Component Analysis*)
- Data Visualization: **Tableau, Power BI, Matplotlib, Seaborn**
- Communication & Storytelling: Ability to effectively **communicate complex data insights** to both technical and non-technical audiences

Machine Learning Engineering:

- Programming Languages: **Python, R**
- Machine Learning Frameworks: **TensorFlow, PyTorch, Keras, and Scikit-learn**
- Deep Learning: **Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs)**
- Model Evaluation: **Metrics selection, bias and variance analysis, model interpretability**
- **MLOps**: Model deployment, monitoring, version control, continuous integration/continuous delivery (CI/CD)
- Cloud Platforms: Experience with cloud platforms like **AWS, GCP, or Azure** for model training, deployment, and serving
- Containerization Technologies: **Docker and Kubernetes**
- Version Control: **Git**
- Communication & Collaboration: Ability to **effectively communicate complex technical concepts** to both technical and non-technical audiences

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Devops & Architecture/Infrastructure:

- Developing **scalable** and implementing **data pipelines**
- Experience with Cloud providers (IAAS/PAAS) **AWS, Google Cloud, Microsoft Azure, and IBM Cloud**
- **SQL/NOSQL** Databases, **Postgresql, Mysql, MongoDB, Cloud Datastore, Redshift, BigQuery, Aurora**
- Deployment with **Shell** scripting, & experience implementing **blue/green deployments, Canary deployments, Traffic splitting, A/B etc.**
- Monitoring/Reporting tools using **Statsd, Grafana, Graphite, Cloudwatch**
- Configuration as code using **Chef, Ansible**, Infrastructure as code using **Terraform, Elastic Beanstalk, CloudFormation**

Core Beliefs & Mantras:

- Strong believer in embracing a **Devops Mindset**
- Believer and promoter of a **flat hierarchy**, when leading, do so from the back, **servant leadership**
- **Team player**, always seeking to increase the Bus factor
- **Business savvy**, able to fluently translate between **engineering** and **commercial** value
- Agile frameworks familiar with **Scrum, Kanban, scrumban, Build your own**
- Understands the pros and cons of **Test driven development** (TDD)
- **Behaviour driven development** (BDD), Using **Selenium**
- **Business modelling & Domain Driven Design**, Product focused approach
- **CI & CD** with **Jenkins, gitlab, github**
- **Peer Review, Mentoring, Leadership** skills and experience
- **Automation** of testing/integration/deployment
- **Self starter**, self motivated, strong work ethic

Education:

- **GPU-Accelerated Data Science, AI, and HPC (High Performance Computing)** | *Nvidia Deep Learning Institute*
- **Specialization Certificates in MLOps and Generative AI/ LLM** | *DeepLearning.AI*
- **Professional Certificates in Data Engineering, Advanced Data Analytics, and AI Engineering** | *Coursera Inc.*
- **STEM Bachelor's Degree in Computer Engineering** | *Polytechnic University of the Philippines*

Work Experience: (Permanent)

I most enjoy a varied workload, and have an insatiable appetite for knowledge and understanding. I'm not the guy that knows it all and has an answer for everything, I'm the guy that's continually asking questions, drawing diagrams at the whiteboard, documenting things, and passing on what he's learned to anyone that will listen.

I'm dedicated and product focused, I'm continually looking for new ways to deliver value, improve things, and understand my domain. I'm also quite comfortable dealing with upper management, stakeholders, product owners or end users, gathering business requirements, planning user stories, or asking for input.

OSS Engineer | Vodafone New Zealand (July 2017 - June 2018)

Key Responsibilities:

- Managed and maintained VFNZ's Operational Support Systems (OSS) infrastructure, including Fault Management, Capacity Management, Accounting, Performance Management, Security, and Customer Experience tools.
- Utilized expertise in Netcool, Amdocs/Cramer, CA eHealth, Arantech/Tektronix Touchpoint CEM, Tektronix/Netscout 14u, Geoprobe, and ISNG platforms.
- Ensured VFNZ user access management for all OSS tools, upholding security protocols.
- Performed passive network probing to monitor and troubleshoot network performance.

Impact: ● Directly contributed to the smooth operation and performance of VFNZ's OSS critical infrastructure, supporting Ops Teams. ● Proactively identified and resolved potential issues, minimizing downtime and ensuring service continuity. ● Implemented best practices and maintained system health, contributing to VFNZ's operational efficiency and cost optimization.

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Mobile Applications & Infrastructure Support Engineer | Telecom New Zealand (Oct. 2007 – Aug. 2015)

Key Responsibilities:

- Extensive Systems Administration: Managed mixed infrastructure including Unix/HP-UX/Windows servers, Linux distros (RHEL, Debian, SUSE), Oracle DB (11G, TimesTen), MySQL/CGE, SQL Server, F5 LTM/GTM load balancers, Cisco/Extreme L2 switches, Veritas/Sun clusters, Veritas/EMC backup suites, EMC/Sun SAN/NAS storage, HP/Sun tape libraries, and Citrix environments.
- Multi-Vendor Support: Provided Level 2 technical support for Spark NZ's 3G/4G mobile core applications spanning HLR/HSS, SMSC, MGW, NSS, SIP/VoIP servers, Roaming Platform, SS7oIP/ITP gateways, etc. across diverse platforms (Linux, HP-UX, Solaris).
- Software Testing & Upgrade Management: Performed in-depth functionality testing, bug verification, and upgrade implementation for mobile application platforms.
- Change Management Expertise: Developed comprehensive Implementation Plans, Method of Procedures, and Regression Test Plans for stringent Mobile Change Review Board approval before production changes.
- 24x7 On-Call Support: Delivered critical 24x7 on-call support, including rigorous fault analysis and escalation to product vendors when needed.

Impact: ● Ensured smooth operation, maintenance, and performance of Spark NZ's mobile core infrastructure, supporting millions of users. ● Proactively identified and resolved platform issues, minimizing downtime and ensuring service continuity. ● Maintained platform stability and implemented upgrades to enhance performance and functionality. ● Streamlined change management processes for efficient and secure production environment updates. ● Provided round-the-clock technical support, contributing directly to network uptime and customer satisfaction.

Mobile Applications & Infrastructure Support Engineer | Alcatel-Lucent NZ (Oct. 2007 – Aug. 2014)

Key Responsibilities:

- Extensive Platform Expertise: Managed operation and maintenance of critical mobile core applications including Mobile IN, HLR, HSS, STP/SS7oIP, SMSC/ESMSC, Roaming Platform, WAP/PUSH/MMS, Mobile Extension, RADIUS, DIAMETER, eVPN, and eMRS across diverse platforms (Linux, HP/UX, Solaris).
- Upgrade & Testing Specialist: Conducted detailed functionality testing and bug verification, ensuring successful software upgrades for mobile core platforms.
- Change Management Pro: Developed and documented comprehensive Implementation Plans, Method of Procedures, and Regression Test Plans for rigorous Mobile Change Review Board approval before production changes.
- Migration Lead: Led the successful migration of SparkNZ's WAP Proxy and Push Gateway, including network/application integration and test plan/script creation.
- Project Support: Provided operational support for various projects, including platform upgrades, replacements, and new Value-Added service launches.
- Performance Optimization: Enhanced service and network alarm detection by writing shell scripts and utilizing performance tools (rrd, cacti).
- 24x7 On-Call Support: Delivered critical 24x7 on-call support, performing advanced fault analysis and escalating issues to product vendors or Level 3 groups when necessary.

Impact: ● Ensured smooth operation and high availability of critical mobile core applications, impacting millions of Spark NZ customers. ● Minimized downtime and service disruptions by proactively identifying and resolving platform issues. ● Streamlined change management processes for efficient and secure production environment updates. ● Successfully migrated complex applications, ensuring seamless integration and service continuity. ● Improved operational efficiency and performance through script automation and data analysis tools. ● Provided round-the-clock technical support, contributing directly to network uptime and customer satisfaction.

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Licenses & Certificates:

Full-Stack | Full-Pipeline | End-To-End Data Science and Data Architecture Focused Competencies:

NVIDIA Deep Learning Institute - Advanced Technical Workshops:

- [Fundamentals of Accelerated Data Science \(with RAPIDS\)](#)
- [Fundamentals of Accelerated Computing with CUDA C/C++](#)
- [Fundamentals of Accelerated Computing with CUDA Python](#)
- [Fundamentals of Deep Learning](#)
- [Building Video AI Applications at the Edge on Jetson Nano \(Edge AI\)](#)
- [Getting Started with AI on Jetson Nano \(Edge AI\) - v2.0](#)
- [Getting Started with DeepStream for Video Analytics on Jetson Nano \(Edge AI\)](#)

Machine Learning Engineering / AI Engineering:

- [DeepLearning.AI - Generative AI with Large Language Models \(LLMs\)](#)
- [IBM Generative AI for Data Scientists Specialization](#)
- [Google Cloud Generative AI Fundamentals](#)
- [DeepLearning.AI - Machine Learning Engineering for Production \(MLOps\) Specialization](#)
- [Duke University - MLOps | Machine Learning Operations Specialization](#)
- [IBM AI Engineering Professional Certificate \(V2\)](#) (with Eligibility Credits for Advanced-Degrees)

Advanced Data Analytics:

- [IBM Data Science Professional Certificate \(V2\)](#) (with Eligibility Credits for Advanced-Degrees)
- [IBM Applied Data Science V2 Specialization](#) (with Eligibility Credits for Advanced-Degrees)
- [IBM Data Science Fundamentals with Python and SQL](#)
- [IBM Data Science Foundations](#)
- [Google Data Analytics Professional Certificate](#) (with Eligibility Credits for Advanced-Degrees)

Mathematics for Machine Learning & Data Science:

- [Imperial College London - Mathematics for Machine Learning Specialization](#)
- [DeepLearning.AI - Probability & Statistics for Machine Learning & Data Science](#)

Data Engineering:

- [IBM Data Engineering Professional Certificate \(V2\)](#) (with Eligibility Credits for Advanced-Degrees)
- [IBM Data Warehouse Engineer Professional Certificate](#)
- [IBM NoSQL, Big Data, and Spark Foundations Specialization](#)
- [IBM BI Foundations with SQL, ETL and Data Warehousing Specialization](#)
- [IBM Data Engineering Foundations Specialization](#)

Data Pipelines and IT Automations with Python:

- [Google IT Automation with Python Professional Certificate](#)