



EMERALD TABIRAO BARIAS

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PROFILE

A Software Engineer with 15 years of industry experience designing and delivering cloud-based solutions that enhance productivity, collaboration, and business intelligence to customers. Holds a *Master of Information Technology degree in Artificial Intelligence and Data Science & Engineering*, and a *Bachelor degree in Computer Science*. Skilled in applying the appropriate technologies and best practices to solve complex problems and create value for customers. Also an experienced Technical Lead who have successfully handled multiple projects involving pre-sales workshops, consultations, migrations, and solution enhancements for Microsoft technologies. Takes pleasure in working with diverse teams and stakeholders, striving to exceed expectations and deliver high-quality results.

KEY SKILLS | SPECIALISATIONS

- Full Stack Software Engineering and DevOps
- GenAI, Machine Learning Engineering, Data Engineering and MLOps
- Solution Architecture for Cloud technologies (Microsoft 365, Azure, AWS, GCP)
- Digital Transformation, Business Analysis and Data Mining
- Presentation and Communication
- Python, PyTorch, Tensorflow, Keras, Scikit-Learn, Pandas, Matplotlib, OpenCV, SQL, C#.Net, Java, Scala, PowerShell, Javascript, Typescript, JQuery, React, CSS, HTML, ASP.Net MVC, REST

AI, MACHINE LEARNING AND DATA ENGINEERING EXPERIENCE

The following practical projects were implemented and delivered as required by postgraduate degree.

- **MovieHub: a Movie Recommender System**
Applied skills: Machine Learning (Recommender), Data Services Engineering
A web application designed for providing movie recommendations to an individual and/or a group of friends, where I was responsible for the database layer architecture and implementation, as well as the recommender module's design and implementation.
- **NSW Parking Sign Interpreter Application**
Applied skills: Deep Learning (Neural Network), Computer Vision
Implemented an application for mobile phones, where I was responsible for the image-to-text conversion module applying computer vision, machine learning and OCR text recognition techniques to identify parking sign variable-sized symbols and texts from a mobile phone image.
- **Loan Approval Prediction, NSW Routes Visualisation**
Applied skills: Data Mining, Data Services Engineering
Conducted data pre-processing, clustering, visualisation, and training/modelling using Python, Pandas, Scikit-learn and Matplotlib. These are complemented with individual projects showcasing data services engineering through Flask-Restx.
- **Document Information and Similarity Retrieval**
Applied skills: Big Data, NLP, Information Retrieval
Implemented (1) TF-IDF for content information retrieval using Java and MapReduce on Hadoop with HDFS (2) Relative Frequency using Scala and (3) Set Similarity using Spark on AWS EMR.
- **Cell Segmentation Analysis**
Applied skills: Computer Vision

Performed biological cell tracking analysis given sequence of microscope images. Cell segmentation and tracking techniques were natively implemented for scrutiny using Python and OpenCV. Our group collaborated via python notebook on Google Colab and/or Jupyter.

CAREER HISTORY

Optus NSW – Solution Architect, Senior Technical Lead

Jul 2018 – Oct 2023

Responsibilities:

- Simultaneously handle multiple customers providing technical consultation, pre-sales discovery workshops, solution enhancements, landing work engagements for both on-premises and cloud solutions.
- Senior Technical Lead for engineering Microsoft 365 cloud-based productivity solutions.
- Presales discovery and solutioning for Microsoft 365, Power Platform and Microsoft Teams deals.

Achievements:

- Joined Optus as a Senior Technical Lead delivering digital transformation services through digital forms, automated workflow transformation and document management solutions for customers.
- As a Technical Consultant, I have successfully engaged customers to trust our team in delivering continuous application enhancements, through consulting strategic pathways for modernising and upgrading their corporate sites and processes.
- As a Solution Architect, I have sold professional and managed services for customers' Microsoft 365 product suite utilisation by aligning the solutions to customers' needs.

Datacom NSW – Technical Consultant

May 2016 – Jul 2018

Responsibilities:

- Software design and engineering for customers' intranet and internet sites.
- Consulting and delivery of reusable migration template from on-prem to cloud-based platforms.
- Presales solutioning for Microsoft 365 collaboration and productivity opportunities.

Achievements:

- Provided strategic pathways to migrating NSW Health client's on-premise intranet sites to Microsoft 365 and implemented a reusable migration templated process to meet the aggressive timeline.
- Key delivery personnel, deployed as an in-house resource, that enabled the company to continue providing enhancements to NSW Health's Microsoft 365 sites.
- Successfully resolved within a few weeks, a randomly occurring synchronisation issue on the integration component of Federal Court Australia's digital court cases that has gone unresolved for months.

Microsoft Singapore – Consultant

Mar 2015 – Apr 2016

Responsibilities:

- Web application and SharePoint deployment consultant championing Microsoft best practices.
- Software Engineer resource for web application development.
- DevOps consultant for the *then*-fledging Visual Studio online offering.

Achievements:

- Stakeholder engagements meeting solution requirements while advocating alignment to Microsoft recommended frameworks and best practices.
- Conducted several community talks and workshops on Microsoft technology updates.
- Implemented digital forms and workflow transformation using the *then*-state-of-the-art SharePoint Online workflow platform.

Acceltus Singapore – Technical Lead Consultant

Mar 2013 – Feb 2015

Responsibilities:

- End-to-end involvement with customers from pre-sales to delivery, handover and support.
- Led and coordinated a team of 2-3 people to deliver web application engagements.

- Conducted several community workshops on Office 365 technology awareness.

Achievements:

- As a start-up founding member, experienced simultaneously handling multiple customer engagements while leading the team to deliver the sold outcome.
- Maintained relationship and developed effective handover process with UI and UX design partners successfully implementing several web applications tailor-fit for customers' needs.
- Designed and implemented reusable SharePoint farm deployment and upgrade scripts given the rising demand for transition to the *then*-latest version of web application on-prem or online (Office 365).

PRIOR ROLES

Amnet Technology Singapore – Solutions Developer

Jul 2012 – Mar 2013

- Engaged as an associate on web application projects being involved from requirements gathering, design specifications towards implementation and handover.

Dimension Data Singapore – Associate Consultant

Oct 2009 – Jul 2012

- Progressed from developer to associate consultant in a span of two years, having proven myself as an effective team lead overseeing 6 to 10 team members, delivering intranet portals for the following government customers.
- Deployed as an in-house resource to OCBC Bank Singapore client performing requirements gathering, application design and implementation for the customer's intranet mini-projects.

PROFESSIONAL DEVELOPMENT

- Optus-hosted *Design Thinking* workshop and *Innovation Mindset* hackathon
- Women Rising <https://womenrisingco.com/> – career empowerment and leadership development programme

QUALIFICATIONS

- Master of Information Technology with dual specialisation in Data Science & Engineering (COMPSS) and Artificial Intelligence (COMPAS) - *University of New South Wales, Australia*
- Bachelor of Science in Computer Science with specialisation in Software Technology - Cum Laude award - *De La Salle University Manila, Philippines*

TRAININGS

Generative AI with LLM

DeepLearning.AI – Nov 2023

Machine Learning Engineering for Production (MLOps) Specialisation

Coursera – Dec 2023

- Introduction to Machine Learning in Production
- Machine Learning Data Lifecycle in Production
- Machine Learning Modeling Pipelines in Production
- Deploying Machine Learning Models in Production

Generative AI for Business Leaders

LinkedIn Learning – Feb 2024

CERTIFICATIONS

A comprehensive list of my certification badges can be found in [Acclaim](#). The notable ones are as follows:

Microsoft Certified: Azure Data Engineer Associate: Renewed validity to 2024	24 June 2021
Microsoft Technology Associate: Database Fundamentals	28 October 2017
Microsoft Certified Solutions Associate: Office 365	8 September 2017
Microsoft Certified Solutions Associate: Web Applications Charter Member	26 September 2016
Microsoft Certified Solutions Developer: App Builder Charter Member	
Microsoft Certified Solutions Developer: SharePoint Applications	29 April 2015

NOTABLE COMMUNITY TALKS

I had the pleasure of conducting the following community talks in Singapore on providing Microsoft technology awareness:

- Microsoft Singapore Services Symposium, conducted on October 30, 2015
- [Business 365 Saturday at Singapore](#), conducted on October 24, 2015
- [Powershell Conference Asia 2015](#) Singapore, conducted on September 18, 2015
- [Community Technology Update 2014](#) Singapore, conducted on November 15, 2014
- Community Technology Update 2013 Singapore, conducted on July 27, 2013
- SharePoint Community Day at Kuala Lumpur, Malaysia conducted on May 28, 2013

REFERENCES

Available on request