MEI GANGWEN

CLOUD SOLUTIONS ARCHITECT | FULL STACK ENGINEER

CONTACT

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📍 Singapore

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PROJECT LINKS

My GitHub

Landbox.sg - a digital twin project

Wonder Earth App

TECH SKILLS

- **Coding:** Python, Typescript, Javascript, C++, Swift, CSS

- **Web:** React, Node.js, Next.js, Three.js, Restful APIs

- **DB:** MongoDB, MySQL

- **Mobile:** iOS/Android, React-Native

- **Game Engine:** Unreal Engine, Unity

- **Cloud:** AWS, Alibaba Cloud, CDN, Lambda functions

- **DevOps:** Severless, Docker

- **Version Control:** Git, Perforce

PROFILE

Innovative **cloud-native** architect with 10+ years across **full-stack development**, **cloud infrastructure**, and **real-time 3D** applications. Adept at designing secure, scalable cloud solutions integrating **React, Node.js, Three.js**, and **serverless** architectures. Recognized for shipping high-impact digital products, automating infrastructure, and blending **AI/ML** into interactive systems.

WORK EXPERIENCE

Yilumi Studio, Singapore
2021 - PRESENT
Founder | Solutions Architect | Full Stack Engineer

- **Landbox.sg**, a **digital twin web app** for real estate visualization
  - Designed and deployed a full-stack 3D web app on **AWS** using **React, Next.js, Three.js, Node.js**
  - Set up **IAM roles**, **API Gateway**, **Route 53**, and **CloudFront distributions** for secure & high-availability access
  - Containerized deployment using **Docker** and **CI/CD** pipelines for seamless updates
  - **Automation:** procedurally generate 3D assets from OSM data
  - **Recognition:** Acknowledged by the Prime Minister's Office (PMO) for contributions to Landbox.sg

- **SG 3D Map**, a public accessible **geospatial map platform**
  - Built an end-to-end **ML pipeline** in Python to clean & filling missing values for OpenStreetMap (OSM) datasets
  - Built a custom **Vector Tile Server** (PostGIS) using data collected from OSM, OneMap and HDB
  - Established complex **ETL data pipeline** to transform map data
  - Integrated Three.js + MapLibre for rendering with **RESTful APIs** for location queries

- **Wonder Earth App**, a high-scale mobile product, leading to 5M+ downloads
  - Managed full **development lifecycle**, from planning to launch
  - Built **RESTful APIs** on Alibaba Cloud using **API Gateway**, **Function Compute**, and serverless **MongoDB** to manage logins, user stats, and order processing
  - **Generative AI:** contents creation including texts, speech, images and quiz
  - **Cost Management:** Optimized cloud costs on **AWS** and **Alibaba Cloud**, optimized **ad spending** on social media platforms
  - **Analytics:** Monitor user reviews, tracking activities, A/B testing
  - **Recognition:** HuaWei Gallery Editor's Choice (Nov 2022)
  - **Tech Stack:** Unity 3D, Houdini, MongoDB, Microservices, CDN, Restful APIs, Function Compute

Bandai Namco Studios Singapore
2016 - 2021
Senior Technical Artist

MEI GANGWEN
FULL STACK DEVELOPER

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LANGUAGES

- English (Proficient)
- Mandarin (Native)

- **VFX Configuration System:** Designed and implemented a scalable VFX configuration system using C++ and Unreal Engine.
- **Procedural Asset Generation:** Developed Houdini-based procedural workflows to streamline asset creation.

Double Negative
2014 - 2015
VFX Technical Director

- **Destruction setup:** Led look development, simulation, and rendering of complex destruction sequences.
- **Simulation Workflow:** Established and documented advanced fire and smoke simulation techniques for "Bridge of Spies".

Lucasfilm Animation Singapore
2009 - 2014
VFX Technical Director

- **Animation optimization tool:** developed a Maya tool using Python to smartly reduce keyframes on rigid body objects with animation baked from dynamic simulations.
- **Operational Efficiency:** Developed tools improving production workflows in VFX and animation.

Bank of America Merrill Lynch
2008 - 2009
Business Analyst

- **Process Automation:** automated several monitoring processes by running scheduled tasks with python scripts.
- **Data Visualization:** developed a workflow to visualize server data such as CPU usage, storage space with animated 3D charts and graphs on the web interface.

CERTIFICATION

AWS Certified Solutions Architect - Associate

AWS Certified AI Practitioner

EDUCATION

Bachelor of Electrical Engineering
2004 - 2008
National University of Singapore

GCE 'A' Levels
2002 - 2003
Raffles Junior College

GCE 'O' Levels
2001 - 2002
Raffles Institution