

CAI WEIYU

VETERAN SINGAPOREAN DEVELOPER |
INNOVATIVE PROBLEM-SOLVER |
GEOSPATIAL DEVELOPER



CONTACT

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- Singapore
- <https://caiweiyu.com/geospatial/resume>

PROJECT LINKS

- [My GitHub](#)
- [3D SG Map](#)
- [Regional Landscape Map](#)
- [Landbox.sg - a Digital Twin Project](#)
- [Wonder Earth App](#)

TECH SKILLS

- Geospatial:** Maplibre, Mapbox, PostGIS, OSM, OneMap, Vector tile
- C#, Python, Typescript, C++, Java, Javascript, Swift, Kotlin
- Web:** React, Node.js, Next.js, Three.js
- DB:** MongoDB, MySQL
- DevOps:** Docker, Nginx, Automation test, CI/CD, Agile
- Mobile:** Android/iOS, React-Native
- Cloud:** AWS, Google Cloud, Firebase, Cloud Functions.
- Tools:** Git, Perforce, Linux, Android Studio, Xcode



PROFILE

Results-driven developer and founder with over a decade of experience in software innovation, app development, and video game production.

Strong domain knowledge on Geospatial with real products.

Proven expertise in managing impactful projects, driving revenue growth, and engaging with government stakeholders.



PROFESSIONAL EXPERIENCE

Founder of Yilumi Studio, Singapore 2020 - PRESENT

- Developed **Geospatial** prototypes, **public accessible**:
 - a SG **3D Map** Prototype, <https://map.landbox.sg>
 - Our custom **Vector Tile server (PostGIS)**, data source: OSM+ OneMap + HDB
 - Customized **web** 3d rendering with three.js + **Maplibre (Mapbox)** tile rendering
 - RESTful** APIs (move to location with lat/long in URL)
 - a regional 3d landscape map prototype: <https://region.landbox.sg>
 - Uses vector tile server for raw data
 - Renders beautifully without dependencies on Mapbox.
- Creator of Landbox.sg**, a digital twin web app enhancing the HDB BTO process.
 - Full stack web application development:** used modern web development frameworks.
 - Frontend:** Typescript, React, Next.js, three.js.
 - Backend:** Node.js, Typescript.
 - Acknowledged by the Prime Minister's Office (PMO)
 - Held multiple discussions with HDB, earning recognition for Landbox.sg's market potential.
- Creator of Wonder Earth App**, a 3D educational **mobile app** which is renowned in China:
 - Wrote **100K+ lines** of **C#** in Unity Engine from scratch.
 - 5 million downloads, over 1 million users. Revenue > SGD 600k.
 - HuaWei Gallery Editor's Choice (Nov 2022).

Bandai Namco Studio Singapore 2016 - 2020
Senior Software Developer

- Agile Development:** making key systems in video games like Ace Combat and other prototypes (C++). **Waterfall project management.**

Autodesk Singapore 2013 - 2016
Software Developer

- Full software development cycle** for software like Maya (C++).
- Automation test** (Jenkins) and **CI/CD** for faster iteration.
- JIRA, Scrum**

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COMMUNITY INVOLVEMENT

- Grassroots Leader at Woodgrove RC (2014 – 2019)
- Led Citizen on Patrol initiatives to improve community safety and engagement.

LANGUAGES

- English
- Mandarin Chinese

Lucasfilm Singapore

2010 - 2013

Software Developer

- DevOps:** Automation testing (Jenkins). Implemented a **backup system** for movie visual effects industry (Python).
- Implemented a **digital asset pipeline system**, support **configuration management** (Python).

TECHNICAL SKILLS

Geospatial: Maplibre, Mapbox, PostGIS, OSM, OneMap, Vector tile, web mapping, location based service.

Programming Languages: C#, Python, Typescript, C++, Java, Javascript, Swift, Kotlin

Web Full Stack: React, Node.js, Typescript, Next.js, Three.js, R3F, HTML, CSS, Modern Build Frameworks. Frontend / Backend. **RESTFUL APIs.**

DevOps: Docker, Nginx, Automation test, CI/CD, Agile.

Database: MongoDB, MySQL, Postgres, Firebase Firestore.

Mobile: React Native, Android, iOS.

Cloud: AWS, Google Cloud, Firebase, Cloud Functions.

Tools: Git, Perforce, Linux, Android Studio, Xcode

Notes: All above skills are used to build mobile apps and web app to serve millions of users, with stable services.

LEADERSHIP & MANAGEMENT SKILLS

Regulatory Strategy: Proven ability to navigate regulatory landscapes and platform support across foreign markets, exemplified by Wonder Earth's success in China.

Stakeholder Engagement: Skilled in managing cross-cultural communications and liaising with high-level stakeholders, securing recognition and interest from entities like HDB for Landbox.sg.

Competitive Response: Successfully mitigated the impact of a competitor's unethical and false report to foreign regulators, ensuring the integrity and continuity of our app.

EDUCATION

Master of Science, Digital Media

2009 - 2011

Nanyang Technological University

GPA: 4.68 / 5.00

Bachelor of Engineering, BioEngineering

2003 - 2007

Nanyang Technological University