

Tan Xue Wen, Rayner

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Summary

Self-driven and adaptable learner. Organized and meticulous. Experienced working as a Game Programmer and Mobile Programmer. An avid reader and experimenter. Cares about the learning and understanding. A people-oriented individual, involved in service, having served 2 years as a fulltime volunteer. Always learning!

Advanced Proficiencies: C/C++, C#, Swift, Objective C, Java

Additional Proficiencies: Metal, OpenGL, Kotlin, Dart, HTML, CSS, Golang, SQL

National Awards

- Singapore Computer Society – IT Youth of the Year Award Finalist (2019)
- Lee Kuan Yew Award for Mathematics and Science (2017)
- SiTF Awards – Best Presenter & Project Special Mention Awards (2016)

Work Experience

Shopee Singapore Pte. Ltd. (January 2026 – Present)

- Full-time iOS Engineer (App Platform Native Infrastructure Team)
- Worked on system level bridges and SDK for the Shopee App across multiple market regions.
- Developed and maintained core infrastructural SDKs and frameworks.

Temasek Polytechnic Adjunct Lecturer (2024 – 2025)

- Taught Math & Physics Programming
- Taught Programming in Game Engines (Unity C#)
- Taught Computer Graphics and Programming
- Taught Mobile Applications (Flutter + Firebase/Firestore)
- 100% for TESSy (Teaching Evaluation & Subject Survey)

LandShark Games Pte. Ltd. (2 years cumulative 2016 – 2022)

- Full-time Game Programmer
- Designed and built a reusable client-server caching system.
- Developed new player profile system, working on both backend & frontend.
- Established Unity iOS build pipeline, writing various tools and plugins.
- Worked on many systems including asset management enhancements, debug tools and environments, new gameplay features for new IPs, etc.
- Implemented gameplay features and work on build tools for Grifford Academy, now out on Steam early access.
- Helped establish tools for the new 3D pipeline in the company
- Provided update support for current IPs, increasing product stability.
- Worked on a dynamic animation system driven by math, involving custom shaders, sprite weighted deformations, and post processing effects. This became the Zen Koi 2 dragon animation, the key new feature of the game.

Ackcio Pte. Ltd. (3.5 months in 2023 as Summer Intern Programmer)

- Set up CI/CD for android application product with Docker and BitBucket pipelines, unit testing and instrumentation tests.
- Documented hardware testing procedures and resolved bottlenecks from

firmware team.

- Modularized hardware simulations to decrease dependencies and improve iteration cycles for remote engineers.
- Worked with hardware engineers doing hardware reworks.

Fulltime Volunteer Work (2 years: 2019 – 2021)

- Fulltime volunteer for The Church of Jesus Christ of Latter-day Saints, serving in the Australia Melbourne Mission.
- Served as the mission technology specialist, handling tech issues and support for 40 to up to 195 volunteers, scaling management corporate fleet of devices and solutions.
- Leader of 20-35 other fulltime volunteers, leading them in serving the community and working with various organizations to help those in need.
- Worked with external organizations to teach essential English to internationals who were stranded due to COVID19 border closures.

Education

Singapore Management University

2022 – 2026

- Graduated with Summa Cum Laude (Highest Distinction)
- Multiple distinctions, full cGPA of 4.0 / 4.0, Director's List
- Research Assistant (main C# unity developer) for VR research project (2024). Worked on Meta Quest 2, building an immersive lesson solution to teach year 1 CS students basic data structures and algorithms (e.g. BST, AVL, red-black trees) using VR manipulatable tree nodes.

Temasek Polytechnic

2014 – 2017

Diploma with Merit in Game Design & Development [GDD]

- Awarded the Lee Kuan Yew Award for Mathematics and Science
- Course Gold Medal, with perfect cGPA of 4.0 (full score 4.0)
- Achieved 27 Distinctions in diploma subjects such as Advanced Game AI, Game Production and Publishing, Game Development Project, Game Math and Physics, Game Modeling, Graphics Programming, and Game Design.
- Received the Infocomm Media Development Authority (IMDA) Excellence Award, the Jurong Port Special Industry Prize, the Jurong Port Project Prize, and the Jurong Port Prize.
- Led team of 6, developed Tower Power, a Virtual Reality (HTC Vive), asymmetrical multiplayer game. Featured in showcase at Unite Singapore 2016. Main programmer for networking design and implementation. The game features hundreds of A* led enemy agents networked across clients. Tower Power was also awarded "Best Project" at TP InfoTech Day 2017.
- Developed Chessgeon in Unity Game Engine, a unique combination of card games and chess. Features optimized A* algorithms running on mobile.
- Led team of 4 in development of Cellulose, an action strategy mobile game involving 250 flocking-enabled AI cell units controlled in groups. Made with Unity Game Engine. Cellulose is a finalist in SiTF Awards 2016.

School of Science and Technology, Singapore [SST] ***GCE Ordinary Level Certificate***

2010 – 2013

- Achieved Top O-Level Performers award (2013)
- Awarded MOE Edusave Certificate of Academic Achievement (2013 & 2011)
- Received SST Achievement Award (2012 & 2011)
- Awarded North West Community Development Council Outstanding All Rounder Student Award – School Level (2011)

Personal Projects

Track Shooter

- Experimental engine-less project written in C, using raylib for rendering.
- Uses a “no build system”, build script is a simple c program that does all build steps (atlas packing, resource movement, cleaning build folder etc.) This build script also auto detects if the src .c file changes and rebuilds itself.
- Uses own custom memory management via memory arenas.
- Has an input record and replay system.
- Modified tower defense game. Towers become “stations” that modify “trains” that pass through. Trains move along a track and shoots at enemies.

Check it out: https://x.com/hashtag/trackshooter?src=hashtag_click&f=live

Custom Metal Rendering Pipeline

Created an interleaving render system with draw call batching. Supports atlases textures, SDF based primitives (rect, rounded rect, circle, rect lines, circle lines), and SDF based text. Ongoing: <https://github.com/raynertanxw/Metal-Playground>

iOS Apps (see website)

Created two iOS apps to help with day-to-day life. A day focused checklist app called Just List It!, and a one-box-a-day countdown visualizer called VizDays. Both are available on the App Store for iOS and MacOS.

Daburu Tools (see website)

A utility tools set for Unity Game Engine. Features flexible, quickly implemented animation functions for all GameObjects, similar to Apple’s SKAction. Designed using Composite Design Pattern.

Small Tools

Created a variety of smaller tools such as a consultation queue system used while teaching. And an elnk display at home that is updated via the web using markdown. Please ask for photos / demonstration if interested.

Co-Curricular Activities

Temasek Polytechnic Game Design & Development Student Interest Group

- President (AY1516 – AY1617)
- Executive Committee Member (AY1415 – AY1617)
- Organized and held 3 school game jams
- Initiated and ran Unity, Gamemaker, and GIMP workshops for freshmen

School of Science and Technology, Singapore Information Communication Technology Talent Development Program

- Pioneer member and Secretary (2012 – 2013)
- Executed 3 EduCamps (unconferences discussing latest technology applications in the field of education) as part of the planning team

Miscellaneous

Contributed to self-initiated service group, raising SGD\$4000 for Japan Red Cross to aid in disaster relief efforts after the 2011 Tōhoku earthquake.

References

Paul Naylor

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LandShark Games Pte. Ltd
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J Patrick Garth

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