

# Nathan Yin

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## Objective

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I'm looking for a job to complement my part-time Computer Science education at UNSW. I consider myself a full-stack web developer in training. I've worked on my own startup idea full-time whilst juggling uni in the past, so I've learnt the value of hard work and putting your best effort into even mundane tasks. I like to host my own websites and I'm focused on building interactive "game" websites using PIXI.js and .NET Core right now.

## Education

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North Sydney Boys High School | ATAR 96

Bachelor of Computer Science (Databases) | University of New South Wales | Distinction WAM.

## Projects

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**Teaser: Reverse Engineered Tiktok** <https://teasernsfw.com>

February 2023-Present

I reverse engineered Tiktok using React Native and Django as a solo developer. I worked full-time on this startup whilst attending university. <https://github.com/Yinnerston/Teaser>

- Independently researched the best system architecture balancing scalability and current demand. I interviewed dozens of potential users to gather a set of requirements, transforming the requirements to an Agile Inception Deck with corresponding epics/user stories on Jira.
- I formulated best practices for application development such as isolating business logic in a service layer after running custom sanitization and validation routines. I implemented REST API design best practices like health checks, versioning, pagination, and ISO8601 UTC dates as standardisation for future contributors. I created a detailed style specification combining Hungarian notation, linting and API design that enabled rapid fullstack development.
- I implemented a mobile video editor, full-text search with a custom search vector and an infinitely scrolling video feed. I also implemented a token-based authentication scheme, comments on posts using a closure table, and user profiles. I gained experience validating forms and managing server state in interactive applications with React Query.
- I implemented performance optimisations such as optimal database index usage and denormalization and applied them to the relevant data, then validated with PostgreSQL EXPLAIN ANALYZE. I read textbooks to identify anti-patterns in my data models, and aggressively cached API responses and React components.
- I learnt a system for how to write documentation for future contributors. I combined technical diagramming with written documentation. I open sourced the project which gave me perspective on how to explain systems to new contributors. You can read the documentation here: <https://yinnerston.github.io/Teaser/>
- Implemented monitoring of docker container, application and cache database metrics through Prometheus + Grafana dashboards. Implemented Exception logging with Sentry.
- Created partitioning and horizontal scalability strategy for the Django application and PostgreSQL on cloud providers.
- Android Play Store Link: <https://play.google.com/store/apps/details?id=com.yinnerston.teaser>
- Related Skills:** Javascript, Python, React Native (Expo, React Query, Jotai), Django (Django Ninja, Swagger), PostgreSQL, Docker, Prometheus, Grafana, Redis, Nginx, Local deployments on Ubuntu Mermaid, FFMPEG

Check out my [Github](#) for some other projects like [Memefeed](#), [Stream Data Processing](#), or [Google Cloud Data Pipeline](#).

## Experience

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University of Western Australia | Online

Casual 2020-2022

Research Assistant / University of Western Australia Law School

Modeled data for seminar slides using the Microsoft Office Suite for Professor Rick Krever and Peter Mellor.

## Activities

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**Yessoku Band 2023** | Sydney. Lead Guitarist and vocalist.

**DSAi Hackathon 2023** | Sydney, UTS Startups. Team project using LlamaIndex and scraped tweets + HTML to make ChatGPT embeddings to predict BHP stock price sentiment.

**UNSW CSE Hackathon 2022** | Sydney, UNSW. Team project using Docker, React, and Google API calls to create a chrome extension that displays related search terms to highlighted text.

**SITHFAB025** Prepare and serve espresso coffee and **SITXFSA005** Use hygienic practices for food safety certification