

# Darren Tsung

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## Employment History

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### Senior Backend Engineer / Tech Lead

Jan 2018 – Present

OneSignal – *Rust, Go, Kafka, Postgres, Redis, Kubernetes*

- Owned the notification delivery pipeline that sends over 5.5B pushes per day, improved deliveries per sec (DPS) from 75k/sec to >1.8M/sec, and built key functionality such as email & batched deliveries.
- Saved \$126k annually by removing need for 70 servers and resolving scaling concerns by implementing high-performance Go web server and migrating and validating API traffic using a custom reverse-proxy.
- Shipped an incremental refactor of overgrown delivery code from a single file with over 12k LOC (lines of code) to many modular classes <300 LOC and 96% test coverage.
- Initiated and led company-wide transition from Travis CI to CircleCI as well as other CI improvements, reducing largest codebase CI times from 14-16 min to 5 min.
- Built shared Rust kafka framework, deployed and used in 7+ consumers handling up to 100k messages/sec.

### Software Engineer, Games

Dec 2016 – Dec 2017

Tangible Play (Osmo) – *C#, Unity3D*

- Shipped the Osmo SDK, a Unity plugin that provides the computer vision / piece recognition as an API.
- Reformatted a 30k LOC codebase by modifying a C# code formatter to work with Unity projects.
- Improved code health by writing a custom threaded static analysis tool in Unity as a pre-code-review check.

### Software Engineer / Senior Software Engineer

Jan 2015 – Dec 2016

Storm8 – *C#, Unity3D, PHP*

- Created modular match-3 engine which simulates 1000's of games concurrently to report win-rates and other statistics to game design while building levels.
- Increased frame-rates by 200%+ on certain devices by implementing dynamic resolution downsizing.
- Increased ARPU (average revenue per user) by >100% by shipping Timed OrderSet feature.

### Mobile Client Intern

May 2014 – Aug 2014

Electronic Arts (EA) – *Objective-C, Java*

- Reduced QA testing time & increased stability by automating fuzzy-testing edge cases using an Android application to parse user logs into sequences of API calls

## Skills & Interests

Descriptions, images, and more detail can be found at <http://www.darrentsung.com/>

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### Open Source Projects (*Rust, C#, Unity3D*)

- 15+ open-source frameworks / tools (combined 400+ stars on Github) that range from automated validation tests to full-featured localization frameworks.

### Technical Writing

- Series of articles about reducing compile time, state machines, etc. with over 80k+ combined views.

**Other:** Rust, Go, Kafka, Postgres, Redis, Terraform, Nomad, Kubernetes.

## Education

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### University of California Berkeley

Aug 2012 – Dec 2014

B.A. Computer Science