

# ERIC TSAI Software Engineer

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## Objective

Full-time software engineering in interactive media

## Skills

### LANGUAGES

Java  
C#  
C++

### SOURCE CTRL

Git  
Perforce

### Dev Tools

Unity  
Jira  
Confluence  
Cloud Foundry  
Jenkins  
Git CLI

### Platforms/OS

Mac  
Linux  
Windows

## Interests

Game AI  
Game Dev  
Livestreaming

## Education

**Carnegie Mellon University, Entertainment Technology Center, Pittsburgh, PA**  
Master of Entertainment Technology May 2016

**University of Virginia, Charlottesville, VA**  
B.S. Computer Science May 2014

## Employment

### Google Stadia / YouTube Shorts - Software Engineer [Java, C++]

August 2020 – March 2023 ▪ Mountain View, CA

- Reduced re-upload spam impacting 1M+ YouTube Shorts by developing a pipeline to index video risk signals identified by TensorFlow and ML models
- Designed & implemented a Stadia recommendation system to auto-suggest free games based on trending games, user preferences, user history, and region
- Developed a full set of emoji reaction functionalities on Stadia to improve user engagement

### Amazon - Software Engineer [Java, C++] <https://github.com/alexa/alexa-auto-sdk>

April 2018 – January 2020 ▪ Sunnyvale, CA

- Added telemetry features for the [Alexa Auto SDK](#) which integrates Alexa into vehicles
- Cooperated & communicated with 3 different teams to design standard metric conventions and test end-to-end metric systems for direct OEM partners to upload metrics
- Implemented Java & C++ modules to capture latency & vehicle metadata from the [Alexa Auto SDK](#) and upload to Amazon CloudWatch, Amazon EMR, etc.

### General Electric Digital – Software Engineer [Java]

September 2016 – April 2018 ▪ San Ramon, CA

- Developed a framework for data scientists to run analytics on the industrial Internet of Things
- Created a runtime library to deploy analytics from the cloud to 30,000+ off-site assets
- Wrote Java & Bash scripts to sanitize 10,000+ analytic datapoints for backwards compatibility

### Simcoach Games - Game Programmer [C#, Unity]

May 2015 – August 2015 ▪ Pittsburgh, PA

- Developed and published 2 Android/iOS games to improve community awareness for clients
- Utilized basic trigonometry to detect touch gestures like circling, swiping and tapping
- Implemented a Unity framework to track player statistics and evaluate in-game performance

## Projects

### Pathfinding & Autonomous AI - Game Programmer [C#, Unity]

Fall 2015 ▪ Pittsburgh, PA

- Created a Unity game where each enemy AI had autonomous movement and pathfinding
- Added autonomous steering and obstacle avoidance by raycasting and calculating momentum
- Programmed and optimized A\* pathfinding so 10+ enemies could concurrently pathfind towards a moving target across a 100x100 grid with many obstacles

### An Ant's Life VR - Game Programmer [C#, Unity]

Fall 2014 ▪ Pittsburgh, PA

- Developed an Oculus VR game in Unity using the PS Move's inertial sensors for natural steering
- Implemented autonomous AI steering for fluid flocking behaviors and group movement
- Published a paper on game immersion by mixing 2D, VR & physical props on [ACM's digital library](#)