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

Platforms/OS
Mac
Linux
Windows

Interests

Game AI
Game Dev
Prototyping
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 compatability

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 intertial 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