

# NHI CHUNG

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Web portfolio: <http://nhibchung.github.io>

## SUMMARY

Software engineer with experience working in game development, AR/VR, and geospatial technology. Experience with R&D, prototyping, AI (deep learning), working with game engines (Unity/Unreal), and developing a proprietary game engine. History of successfully developing features and apps on multiple platforms including Windows, OpenXR, Oculus, Android, and iOS.

## SKILLS

### Technical

- Working knowledge of Unity C#, C++, AR/VR
- Experience with GIS, remote sensing, mapping APIs (Mapbox, Carto, Google Map)
- Familiar with Agile, Scrum, Git, PlasticSCM, Jira, Perforce

## EDUCATION

Aug 2016 - May 2018

### California State University, Fullerton

Fullerton, CA

*Master of Science in Software Engineering (MSE) - GPA 3.83*

Sep 2013 - Jun 2015

### University of California, Santa Barbara

Santa Barbara, CA

*Bachelor's Degree in Geography - Geographic Information Science (GIS) - GPA 3.66*

- Dean's Honors: UCSB Winter 2015, Spring 2015

## EXPERIENCE

Oct 2022 - Present

### Raytheon

Remote (US)

#### Principal Software Engineer

- Develop military training application using Unity and Unreal game engines
- Analyze project codebase and contribute to a networking and architecture upgrade plan
- Implement new software features per customers' requirements
- Document team coding standards, project requirements, source control workflow, new developer guide, etc.

Mar 2021 - Aug 2022

### HAVIK

Remote (US)

#### Software Engineer

- Startup in the military AR/VR training space
- Develop AR & VR simulations for military training using the Unity game engine
- Implement features including networking, voice chat, user login system, gameplay
- Use technology such as Unity C#, AR Foundation, open source libraries, ThreeJS, Distributed Interactive Simulation (DIS)
- Create prototypes for experimental features and applications for Windows and Android

Jul 2019 - May 2020

### NextVR (startup acquired by Apple 05/2020)

Newport Beach, CA

#### Rapid Prototype Engineer

- Use Swift and AVFoundation to create an iOS application that synchronizes multiple iPhone cameras for stereoscopic/VR capture
- Integrate new functionalities into in-house game engine for VR using C++
- Utilize open source libraries to: access VR hardware (OpenVR), render 3D graphics, and play audio for in-house game engine development
- Use Unity game engine to develop prototypes for AR/VR platforms

*R&D Software Engineer: Augmented Reality*

- Startup funded by the National Science Foundation (NSF) for phase I
- Research and develop an augmented reality (AR) application for physical rehabilitation
- Utilize Unity, AI (deep learning - Tensorflow) and other technologies for Android and iOS development

**City of San Jose***Geographic Systems Specialist II*

- Build web maps using Google Maps API, Google Apps Engine, Carto API, and JavaScript
- Help migrate enterprise GIS database, create and publish public facing GIS REST services for basemaps, utilities, and aerial imagery

**PROJECTS***Fantasy Islands Exploration Game*

- An exploration game created with Unreal 5 game engine.
- Gameplay includes exploring floating islands and getting past obstacles such as moving platforms, shooting barrels, rolling boulders, and scaling castle wall.
- Project demo link: <https://nhibchung.github.io/project/fantasyIslands/fantasyIslands.html>

*Matching Cards Game*

- A simple card game created with Unity for WebGL that can be played in a browser.
- This project was for me to learn more about using design patterns in Unity.
- Check out the project on my [Github](#) page.
- Project demo link: <https://nhibchung.github.io/project/matchingCards/index.html>

*Helicopter Simulation Oculus VR Game with 3D Map Based on Real-world Coordinates*

- Created with Unity3D, C#, and WRLD SDK(for 3D maps)
- Gameplay includes piloting the helicopter to waypoints following a navigational arrows
- Project link: <https://nhibchung.github.io/project/helicopterVR/helicopterVR.html>

*Poke-A-Mole Augmented Reality(AR) Game*

- AR game created with Unity3D, C#, and Vuforia AR Groundplane
- Project link: <https://nhibchung.github.io/project/pokeAMoleAR/pokeAMoleAR.html>

*Oculus Rift VR Exploration Game*

- Immersive VR game level created with Unity3D in C#
- Uses the Oculus Avatar SDK hand features for Touch to interact with the environment
- Project link: <http://nhibchung.github.io/project/oculusExploration/oculusExploration.html>

*VR Labyrinth for Android Google Cardboard – based on a Udacity project*

- VR game created with Unity3D in C#
- Project link: <http://nhibchung.github.io/project/vrLabyrinth/vrLabyrinth.html>

*Interactive Solar System created with Unity3D Game Engine*

- 3D browser-based WebGL Solar System application with clickable objects and minimap
- The sun and all planetary objects created using NASA images
- Project demo link: <https://nhibchung.github.io/project/solarSystem/>

*GIS Presentation - 2016 Election Prediction using Geospatial Data – Group Project*

- Used Java and Twitter API to gather geotagged tweets containing 6 popular presidential candidates to make predictions for the 2016 elections
- Compared data with polls, performed sentimental analysis using the Stanford NLP API
- Poster Link: <http://nhibchung.github.io/project/gisPoster.pdf>