

Winnie (Yun-Ni) Tsai

(206) 928-3537 | maverickwinnie573@gmail.com | www.winnietsai0330.com

EDUCATION

B.S. Applied and Computational Mathematical Sciences (Discrete Math and Algorithms Option), Dance Minor

University of Washington, Seattle, WA

Sep. 2019 - Dec. 2023

- GPA: 3.71 / 4
- Courses: Programming I, II (Java), Data Structures (Java), Algorithms (Java), Programming Languages and Implementations (Racket, Ruby), Compiler Construction (Java), Artificial Intelligence (Python), Intermediate Programming Concepts (linux bash shell scripting, git, C/C++), Web Programming (HTML5, CSS, JavaScript, Node.js, MySQL), Discrete Modeling (Python, Java), Continuous Modeling (Python: NumPy, Matplotlib)

Microsoft Azure Fundamentals (AZ-900)

Jul. 2023

MasterTalks (MOOC): Actionable Gamification - Octalysis Framework by Yu-Kai Chou

Mar. 2022

INTERNSHIP EXPERIENCE

Global Marketing Intern, VIVERSE (HTC): Figma, Canva, Airtable, Sprinklr, ASANA, Copywriting **Jul. 2022 - Sep. 2022**

- Developed an XR escape-room world for product launch, enhancing user interaction and engagement.
- Analyzed product placement and community-building strategies of competitive platforms for targeted marketing insights.
- Enhanced product marketing effectiveness to reduce support inquiries by 95% by publishing five user-friendly digital manuals.

System Development Intern, Everlight Electronics: C#, SQL, Tableau

Sep. 2020 - Dec. 2020

- Implemented intranet pages to streamline email communication channels for 800+ global employees within the IT-HR domain.
- Designed Tableau dashboards for sales and manufacturing departments to present reports in monthly meetings.
- Facilitated the implementation of a face recognition system for efficient employee clock in and out processes.
- Provided automated summaries of manufacturing data daily for managers to track progress using SAP HANA.

PROJECTS

MiniJava Compiler (Compiler Course): Java17, JFlex/CUP tools, x86-64 assembly language

Autumn 2023

- Engineered Java 17 compiler for a fundamental subset of Java, applying advanced computer science theories hands-on.

Gaussian Splatting in VR (Immersive the Bay Hackathon): Unity

Nov. 2023

- Transformed an existing Gaussian Splatting implementation into a captivating VR experience using Unity.

WhatCall (DubHacks Hackathon): Unity, C#, IBM Watson Unity SDK, Google Cloud Vision API

Oct. 2023

- Designed and created a language learning app leveraging Cloud Vision API for image recognition and Watson Unity SDK for real-time translations of real-world objects.

Is-It-Fake-News Game (Taiwan Watch Hackathon): Vue.js, Google Apps Script, Google Sheets

Jul. 2023

- Conceptualized and designed a Vue.js web game to raise awareness about fake news, hosted on Vercel with live data integration using Google Apps Script.

Memory Manager (Intermediate Programming Course): C, Shell Scripting, emacs, git, Makefile

Autumn 2022

- Implemented and fine-tuned dynamic memory allocation in C by maintaining a linked list structure to manage free memory.

Pacman Game AI (Artificial Intelligence Course): Python, Reinforcement Learning, Search Algorithms

Spring 2022

- Engineered an autonomous path-finding Pac-Man agent in Python that navigates challenges posed by adversarial ghost agents.

Knowledge Graph Design (Data Structures Course): Software Design

Autumn 2021

- Designed a custom knowledge graph data structure with a tree-based model with an efficient search algorithm.

Mental Work (Informatics Course): PowerBI, User Research, Prototyping

Summer 2021

- Designed biweekly data visualization dashboards using PowerBI to address mental health stigma in the workplace through conducting user research via survey with 150+ responses and iteratively prototyping use cases.

LEADERSHIP

Human Resource Director, Taiwanese Youth Alliance of Pacific Northwest

Jun. 2022 - Jun. 2023

- Spearheaded collaboration with other student organizations to ensure quality of shared events.
- Pioneered the yearbook and promotional video projects to strengthen the TYPAN identity, leading to 95%+ officer retention rate.
- Led project teams through empathetic leadership, placing officers at positions that suit their skills and find achievement.