Sanjay Salem

Artist and Programmer focusing in AR/VR and Computer Graphics.

✉ 10325 Tabor Street Apt 409, Culver City, CA 90232

@ sanjaysalem17@gmail.com
svsalem@alumni.cmu.edu

☎ 214-709-1194 (Cell)
214-495-8195 (Home)

🌐 sanjaysalem.com

Education

Carnegie Mellon University
Bachelor of Computer Science and Art
Minors in *Animation* & *Game Design*
Aug 2018 - May 2022
QPA: 3.4, Dean's List for 5 semesters

Skills

Programming: C/C++, Java, Python, Javascript, Algos/Data Structures
Design: ProCreate, Blender, Maya, Hitfilm Express, Unity Engine
Languages: English, Spanish, Conversational Japanese, Tamil
Areas of Interest: 3D Animation, Computer Graphics, AR/VR

Extracurriculars

Game Creation Society (GCS)
- Form groups and create a playable game within 3-4 months
- Requires teamwork, collaboration, communication, and knowledge of all 3 fields (music, art, programming) to make sure game elements are compatible

Artists Alley Club (AAC)
- Sell fan art at local comic and anime conventions nearby the Pittsburgh area
- Form a community with other local artists to receive and give feedback about each others' artwork

SCS Day Planning Committee
- Plan logistics and events for annual School of Computer Science Day celebration

Project Experience

Sep '20 — **ChatBot & Web Scraping** — Personal Project
Custom gaming Discord chatbot which responds and reacts to user messages, and performs web scrapes upon requests for game-related and player-related data.
- Wrote bot from scratch with the Discord.py library, added web scraping functionality, and deployed to Heroku for continual running and usage.
- Built with **Discord.py, Pycharm, and Selenium WebDriver**

Nov '19 — **Machine Learning & Hand Tracking** — 📍CMU
A recode of Space Invaders which uses hand tracking and gestures as controller movement and shooting input.
- Modified feature extraction software and helped with UI development.
- Built with **p5.js, ml5.js, & open-source Space Invaders code**

Mar '19 — **3D Modeling and Augmented Reality (AR)** — 📍SteelHacks
An AR mobile app that displays device information in AR upon scanning a specific device. Awarded 3rd place at SteelHacks 2019, hosted by the University of Pittsburgh.
- Integrated Vuforia Augmented Reality image database and modeled 3D elements for UI.
- Built with **Firebase, Node.js, Unity Engine, Vuforia AR, & Blender**

Work Experience

Jul'22–Present — **Software Engineer** — 📍Apple
Working on AR applications using the augmented reality (AR) and virtual reality (VR) support offered in ARKit and Metal, as part of the Technology Development Group (TDG) at Apple.

Mar'21–May'22 — **Undergraduate Researcher/Teaching Assistant** — 📍CMU / CMU SCS
Course 15-462 [Computer Graphics]
- Contributed to an open-source graphics course software package (Scotty3D) as part of the CMU-Graphics organization.
- Updated library documentation, added more versatile mesh edit/manipulation functions, implemented new materials for pathtracing-based rendering, improved UI functionality, and added a software rasterizer pipeline as a new future assignment.
- Co-led weekly planning sessions, held office hours for students, and graded assignments and exams.

May'21–Aug'21 — **SWE Intern, ADAS** — 📍Harman International (Novi, MI)
Advanced Driver-Assistance Systems
Combined data from AR and Surround-View (SV) units to create a demo of Augmented Surround View.
- Involved in pre-planning phase, helped calibrate vehicle, generated all new graphical HMI assets, designed HMI display mockup, and drove UI requirements.
- Assisted with building client-side TCP socket for data transfer, writing a POI serializer/parser, processing the geolocation coordinate-space transformation pipeline, and performing in-vehicle testing.

Aug'20–May'21 — **Undergraduate Teaching Assistant** — 📍CMU SCS
Course 15-210 [Parallel & Sequential Data Structures/Algorithms]
- Assisted with course logistics and planning, led and prepared recitations, held office hours to answer student questions.
- Wrote and maintained grading scripts for exams, homework & labs to automate gradebook formatting.