EMILY XIAOHUA ZHANG

3rd Year CMU Computer Science Student

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WORK EXPERIENCE

Synthetic Data Research — Carnegie Mellon University
📅 May 2021 – Present   📍 Pittsburgh, PA

- Tested the capabilities of training object detection models on synthetically-generated image data.
- Conducted experiments modifying lighting, colors, positioning, and other parameters to observe the effects on the models.
- Created an assembly assistant using models trained on synthetic data.
- Wrote an in-depth guide detailing every step required to replicate my experiments.
- Periodically presented findings to lab professor.
- Learned or practiced using Tensorflow, docker, command-line, Python, Blender, Solidworks, Unity, and git.

Virtual Reality Developer — Biomotivate
📅 April 2020 - August 2020   📍 Pittsburgh, PA

- Used Unity 3D to develop a VR meditation app for decreasing cravings and relapses in drug addiction patients.
- Set up VR video playing, designed and implemented menus, and developed more accessible navigation/control features.
- Conducted problem research, product brainstorming, design, and development while collaborating with my team.

Research Lab Intern — Children's Hospital of Los Angeles
📅 June 2018 - July 2018   📍 Los Angeles, CA

- Conducted research about the colonization of enterococcus faecalis in neonatal rats.
- Utilized technical skills such as operating equipment, plating mediums, and identifying significant data.
- Conducted experiments cultivating bacteria and analyzing growth data. Presented findings to the lab group of 6 people. Abstract was accepted by the 2019 Academic Surgical Conference.

PROJECTS

Comfy Knitting Game   📅 Fall 2020

- Lead programmer for a knitting game built in Unity. Worked with two others over the course of 3 weeks.
- Wrote scripts for gameplay, score-keeping, settings management, menus, and other quality-of-life details. Implemented majority of UI.

Club Matching App (HackCMU)   📅 Fall 2019

- Created an app that compiles club info from existing CMU Bridge website and matches and connects the user with student organizations based on various preferences and interests.
- Team of four quickly learned basics of Android Studio from scratch, dividing roles for maximum efficiency.

EDUCATION

Carnegie Mellon University   GPA: 3.6
B.S. Computer Science   📅 Class of 2023

Shady Side Academy   GPA: 3.9
High School Diploma   📅 Class of 2019

COURSEWORK

Computer Systems · Computer Security
Functional Programming
AI: Representation and Problem Solving
Unity Game Development
Linear Algebra · Probability · 3D Calc

EXTRACURRICULARS

CMU Blockchain   Project Member
Project: Discord bot for NFT Resume Entries

Artist's Alley Club   Zine Artist
Art Portfolio: exzdoodle.tumblr.com

LANGUAGES

C   ●●●●●
Python   ●●●●●
Standard ML ●●●●○
Java   ●●●●○
HTML/CSS   ●●●○○

DEVELOPMENT

Unity · Git/Github · Tensorflow
Blender · Android Studio · Arduino
Photoshop · LaTeX · Processing

ACHIEVEMENTS

Allen Newell Scholarship
CMU - 2020-2021

Math League Regional Champions
Western PA - 2016-19

Mathcounts State Champions
Wyoming - 2014