HARVEY WANG

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OBJECTIVE

A passionate problem solver with interests in software engineering, machine learning, and computer graphics.

EDUCATION

PRINCETON UNIVERSITY
PRINCETON, NJ • MAY 2024
B.S.E in Computer Science
GPA: 3.95 / 4.00
Shapiro Prize for Academic Excellence

PARSIPPANY HILLS HS
PARSIPPANY, NJ • JUNE 2020
Valedictorian

COURSEWORK

ML & Pattern Recognition
Computer Vision
Distributed Systems
Algorithms and Data Structures
Computer Graphics
Information Security
Economics and Computing
Robotics

SKILLS

Languages: Python, Java, C, Go, JavaScript/HTML/CSS, R, SQL

Frameworks: Flask, Node.js, Vue.js, ReactJS, Bootstrap

Tools: Git, Linux, AWS, Postman, Blender

EXPERIENCE

AMAZON WEB SERVICES • *SEATTLE, WA* • SUMMER 2023
Software Development Engineer Intern – Amazon CodeCatalyst
- Developed Java application for cross-platform artifact repository replication
- Used SQL databases to support progress saving for large migration tasks

LAIYE • *SHANGHAI, CHINA (VIRTUAL)* • SUMMER 2022
Software Engineer Intern – Product Innovation Team
- Automated an end-to-end (ETL) process mining procedure with Python scripts
- Created Lark bots to automatically send formatted business opportunity reports

TRUETOFORM • *CHICAGO, IL (VIRTUAL)* • WINTER 2021 – 2022
Software Engineer Intern
- Improved 3D alignment algorithm to produce more accurate body avatar models
- Added interactive controls and visual elements to user dashboard with React

PROJECTS

INFINIGEN (PRINCETON VL LAB) • *(Python, Blender)* • SUMMER 2023 – PRESENT
https://github.com/princeton-vl/infinigen
A procedural generator of infinite photorealistic 3D worlds, optimized for CV research.
- Improved algorithm efficiency for scatter material generation

AUDIO-VISUAL SPEECH TRANSCRIPTION • *(Python, JS/HTML/CSS)* • FALL 2022
https://github.com/harveyw24/livecaptionAR
A system to perform audio-visual speech transcription in near real time.
- Created web interface with Flask and HTML/CSS to record video streams and view live captions
- Implemented AV-HuBERT model by Meta for state-of-the-art performance
- Evaluated system in controlled testing conditions with varying light and noise

GLIDER • *(Three.js, HTML/CSS)* • SPRING 2022
https://github.com/harveyw24/Glider
An infinite glider web browser game featuring procedurally generated biomes.
- Implemented infinite terrain and biome generation in JavaScript
- Developed efficient collision detection system and smooth player controls
- Added visual features and in-game interactions to enhance player experience

NOWW • *(Swift, Flask, Firebase)* • 2021 – 2022
An iOS app for facilitating spontaneous meetups between nearby friends.
- Built Flask and Firebase backend to manage event and user data
- Designed and implemented API for Swift frontend to communicate with server
- Published app to iOS Store and conducted user testing on TestFlight