

Gengyuan Huang

Email: gengyuan@ualberta.ca

Portfolio: <https://aghnue.me>

GitHub: <https://github.com/aghnue>

EDUCATION

University of Alberta

Bachelor of Science with Honors – Computing Science · Major GPA: 3.84/4
with First Class Honors / Dean's Honor Roll 2017-2021

Sep 2017 - Jun 2022
Edmonton, Alberta

SKILL

- **Programming Languages:** C/C++, Python, JavaScript/TypeScript, Sass, SQL
- **Frameworks/Libraries:** React, Django, Flask, OpenCV
- **Cloud Computing:** Azure, GCP, Tencent Cloud
- **Development Tools:** Linux, VS Code, Git

EXPERIENCE

Hangzhou Wudiao Culture & Creativity Co., Ltd - Contract

Mar 2022 - Jul 2022
Remote, China

- **Words Never Fall Apart Design & Interactive Installation Art**
Co-author & Programmer

<https://github.com/aghnue/WNFA>

Interactive Installation Art, exhibited in Gallery of the Province of Zhejiang, China

- Proposed and fashioned an interactive installation from the outset with an artist to convert hand-written poem lines into visual posters.
- Designed and built the front-end and the back-end architecture of the Web Application utilizing Web API, Django and RESTful API.
- Used Python computer vision libraries and grid method to create posters from the emotional data and art assets.
- Integrated Tencent Cloud Computing products to efficiently process hand-written Chinese characters.

Online Poster Generator

- Remodeled the original program exhibited in Gallery into a publicly available online version according to client's requirements.
- Reduced the deployment size and cost by rearranging the storage of the core program and the art assets on different Azure serverless computing products.
- Resolved the overhead of the assets loading by pre-requesting art assets in batches with python Asynchronous IO and Async Clients offered by Azure File Share Library.
- Collaborated with the designer on the front-end design to establish a new form of user interaction.

3D Virtual Gallery

- Constructed a frontend 3D website that displays poster results generated from WNFA Exhibition incorporating novel visual-audio elements.
- Achieved 3D animation by CSS 3D transformation and implemented the interactive logic controlled by pure JavaScript.
- Structured the project codebase using Webpack and SASS to achieve modular design that allows code reuse.
- Collaborated with designers on UI/UX design to enhance user experience.

- **Web Development**
Software Developer

- Communicated with clients and designers to design the web application architecture based on their requirements.
- Kept the team on schedule and completed all deliverables before the target deadlines.
- Developed and deployed web applications utilizing technologies such as Webpack, ReactJS, Sass, Azure CDN, and Azure DNS.

PROJECTS

Interactive Moodle Plugin | PHP, PixiJS

Software Developer

- A team project under mentorship of Delphi Technology Corp and Dr. Carrie Demmans Epp to build a plugin for Moodle system that contains five cognitive tests.

ASCII Art Generator | OpenCV.js

<https://github.com/aghnue/AAAG>

Solo Developer

- A creative frontend project that generates ASCII art from images/videos.