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Education

| | | |
|--|---------------------------|-----------|
| London, UK | University College London | 2024-2025 |
| <ul style="list-style-type: none">• MSc in Computer Science• Merit• Modules: Auditory Computing / Applied Deep Learning / Algorithms / Computer Architecture and Operation System / Software Engineering / Database Fundamentals | | |
| London, UK | University College London | 2021-2024 |
| <ul style="list-style-type: none">• B.A. in Media in Game Pathway• First Class Honours• Modules: Designing Games and Interactive Experiences / Quantitative Methods: Models and Inference / Designing Games with Narratives / Designing for VR/AR / Digital Economy and Professional Practice | | |
| Qingdao, China | Qingdao No.9 High School | 2019-2021 |
| <ul style="list-style-type: none">• A-Levels• High School Diploma• Modules: Pure Mathematics A* / Further Mathematics A* / Chinese Literature A* | | |

Work Experiences

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|--|---------------|-------------------|
| London, UK | Native Design | 09/2025 - Now |
| - Full Stack Developer | | |
| <ul style="list-style-type: none">• Developed Arduino firmware in C for a headset case, implementing Wifi provisioning, LED status/animation logic, audio recording control, and button input handling.• Built a Python server to communicate with the device, using UDP for device IP discovery and TCP for reliable audio-stream transport.• Delivered end-to-end features for HP internal tools by developing React front-end components, FastAPI services, and Windows UIAutomation scripts.• Maintained the official website using PHP, HTML, and CSS, including content updates and responsive layout adjustments. | | |
| Beijing, China | INF | 07/2024 - 10/2024 |
| - Technical Artist Intern (Toolchain Development) | | |
| <ul style="list-style-type: none">• Using Python for toolchain development in Unreal Engine 5, such as virtual texture import and texture RGBA channels separation.• Creating baking tools and other custom materials to speed up the art production process.• Making a Python executable to process local textures pixel-by-pixel and rename them according to art production requirements.• Creating animation blueprints to cope with different character interactions. | | |
| Xi'an, China | Synkrotron | 07/2023 - 10/2023 |
| - Technical Artist Intern (Procedural Generation) | | |
| <ul style="list-style-type: none">• Generating the autonomous driving static scene for Geely Company, reading real road mining data and reconstructing the world scene in Unreal Engine 4.• Interpreting GeoJSON file data to craft the natural landscape around various roads, such as shaping mountains and tunnel profiles at junctions.• Creating procedural assets within Houdini, like a building generator, and integrating adjustable parameters in Unreal Engine 4.• Employing the Voronoi diagram and lot subdivision techniques for road network segmentation.• Utilizing OpenCL and Vex for voxel management and heightfield smoothing.• Implementing the L-system for plant growth simulation, leveraging a parallel brushing system with specific iterative patterns. | | |
| London, UK | Satore Studio | 04/2023 - 06/2023 |
| - Unity Developer Intern | | |
| <ul style="list-style-type: none">• Transforming external acoustic signals into floating point arrays using the Fourier transform, leveraging the JUCE framework and C++. | | |

- Grouping float data into various frequency channels using a Unity script.
- Utilizing the Phyllotaxis algorithm for visual representation of audio patterns.

Projects

Voronoi Diagram Based City Generator: A Procedural Generation Approach to Create Adjustable City in Games (Bachelor Degree Graduation Project)

github.com/AudreyPeiyingZhang/PCG-GAMEAI

- Score: 80/100
- Developing a procedural city generator in UE5 using C++.
- Utilizing Multi-layer Perlin Noise to generate terrain.
- Applying Voronoi diagrams for spatial partitioning, constructing points and cells through data structures and graph algorithms.
- Creating meshes through triangulation and performing multiple subdivisions.
- Computing normal, UV mapping, and extruded specific mesh regions.

Technical Skills

| | Proficient | Familiar | Exploring |
|------------------------|-------------------------|-------------------------|---------------------|
| Coding Languages | C, C++, C#, Python, SQL | HLSL, R, VEX, HTML, PHP | React, Node.js, CSS |
| Game Engines | Unreal Engine 5, Unity | N/A | N/A |
| 3D Modeling Software | Houdini, Blender | Zbrush | Marvelous Designer |
| Design Software | Adobe PhotoShop, Figma | Adobe InDesign | N/A |
| General Tools | Git, PostgreSQL | pgAdmin | N/A |
| Video Editing Software | Adobe Premiere Pro | Final Cut Pro | Adobe After Effects |
| Languages | English, Chinese | N/A | N/A |

Portfolio

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