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Education

Texas A&M University, College Station

Aug. 2023 – Aug. 2025 (Expected)

Master of Science in Computer Science

The Hong Kong University of Science and Technology

Sep. 2019 – Jun. 2023

B. Sc. in Data Science and Technology & Computer Science (Double-Major)

- **2022/23 University's Scholarship Scheme for Continuing Undergraduate Students**
Top 10th percentile of all continuing UG students
- **2022/23 CSE Best Final Year Project**: Professor Samuel Chanson Best FYP Award

Internship Experience

Capmi Technology, Ltd.

Jun. 2022 – Aug. 2022

JavaScript, TypeScript

Software Developer Intern

Sha Tin, HKSAR

- Implemented a versatile version of Inertial Measurement Unit (IMU) Sensor-to-Body Calibration Method. Our technique enabled the user to wear the sensor at arbitrary orientations.
- Developed a Foot Rooted Kinematic Model (FRKM) algorithm to support model translation on level ground and a *Kalman* Filter to reconstruct human motions including jumping, running, *etc.*

Research Experience

Undergraduate Research Opportunity Project 🌐

Jun. 2021 – Dec. 2021

Python, TensorFlow

A Machine Learning Approach to study the relationship between urban morphology and urban heat island

- Adopted Feedforward Neural Network (FNN) and Random Forest Regressor (RFR) to estimate the Land Surface Temperature (LST) spatial distribution (annual average) in Hong Kong Island based on quantitative Urban Morphologic Features (UMF).

Projects

Real-time Vacancy Detection System Using Fisheye Cameras (FYP) 🌐

Sep. 2022 – May 2023

Python, PyTorch

- Detecting occupancy status of 12+ parking spaces using one fisheye-camera in real-time.
- Accuracy more than 90% and adopted several methods to overcome noise incurred by pedestrians passing by the parking spaces.

Graphics Projects (Postgraduate) 🌐

Sep. 2022 – Dec. 2022

C++, WebGL, OpenGL

- **Geometry**: Implemented explicit and implicit Laplacian smoothing methods and Laplacian mesh editing technique to deform mesh surface properly considering mesh geometry and topology.
- **Rendering**: Implemented rendering of volumetric cloud using fractal noise and Ray Marching.

Game Project – Pixel Fantasy 🌐

Feb. 2022 – May 2022

C++, OpenGL

- An indie game featuring a 3D ARPG with 2D Sprites without dependency on game engines.
- Set up a standard programmable OpenGL rendering pipeline and incorporated in more advanced graphical effects, including pixelation of characters, shadow mapping, Depth of Field, *etc.*
- Character control, custom camera that focuses on character, and a powerful AI enemy.