

Shuyu Wang

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OBJECTIVE

Dedicated first year MS student from Texas A&M, seeking opportunities for 2023 Summer Software Engineering Internship. Current focus is in Graphics but willing to expand in other fields. Permanent residence holder in the US. In-depth knowledge of C++, OpenGL, Python. Familiar with Linux environment programming. Excellent ability in learning new skills, team leading and communicating.

EDUCATION

Texas A&M University, College Station, TX

Aug 2018 - May 2022

- Bachelor of Science in Computer Science
- Minor in Math
- GPA: 3.973/4.0; Summa Cum Laude
- College of Engineering Dean's Honor Roll

Texas A&M University, College Station, TX

May 2022 - present

- Master of Science in Computer Science

SKILLS

- **Technical Skills:** Mastery of C++, OpenGL, GLSL, Python, Java, MATLAB, C#, HMI, IOT, Haskell, HDL, HACK language. Graphics simulation, Animation, Image and signal processing, Knowledge of Data Acquisition System.
- **Language:** Chinese(native), English(native)

UNIVERSITY PROJECTS

2D Finite Element Method (CSCE 489: Computer Animation)

Dec 2021

- Implemented 2D triangle finite element method(FEM) on a square object using C++ and **OpenGL**.
- Tested the movement of the 2D FEM object with both two fixed points and collision with a sphere. Adjusted the stiffness and Poisson's ratio so that the 2D FEM object shows different physical characteristic when moving.
- Demonstration: https://people.engr.tamu.edu/sueda/courses/CSCE489/2021F/projects/Shuyu_Wang/index.html

Automatic Image Alignment (CSCE 489: Computer Photography)

Apr 2021

- Designed a **Python** algorithm for feature detecting using the approach of Harris corner detector.
- Designed an algorithm for Random Sample Consensus (RANSAC), where the outliers are iteratively detected and excluded.
- Combined the group work and generated the final algorithm for aligning images based on features detected.

Database Design

Oct 2020

- Manipulated, cleaned, and used client data to design a database housed on **AWS** through a TAMU engineering server.
- Allowed users to query any information they want, including searching for an item under multiple conditions.
- Developed the frontend user interface using **Java**, and connected the user interface to the database.

Finding Major Tom: Calculating the best time for photo shooting the International Space Station

Dec 2020

- **Project leader.** The project generates data and information from 3 **APIs**: OpenNotify, Gyazo, and Sunrise/Sunset.
- Managed the project with a 3-sprints Agile process. Hosted and recorded scrum meetings. Made and managed backlogs, burndown charts, LiveMache designs, meeting agendas and minutes, retrospectives, and presentations. Took charge of daily communicating. Planned and led user study. Participated in designing user interface using **Javascript** on **Node.js** platform.

EXPERIENCE

CHELAK Medical Solution INC., Houston, TX

June – August, 2020

Software Technician ; Data Analyst

- Participated in the development of new Electrocardiograph(ECG) signal denoising algorithms. Recorded signals using 3D Cardiac Mapping and Electrophysiology Recording System. Restored, analyzed and processed signals using **MATLAB**.
- Provided technical and operational support. Reviewed, analyzed, and recommended software solutions for project needs.

Texas A&M URS program, College Station, TX

May, 2021 – May 2022

Undergraduate Research Scholar

- Researched on image-based relighting using neural implicit representation and published the thesis on TAMU school server.
- Developed a **Python** algorithm yielding **CUDA** toolkit and **TensorFlow** library, that makes use of the sinusoidal representation networks (SIREN) which has periodic activation functions.
- Tested the newly developed algorithm under multiple new lighting conditions. Compared and evaluated the results.
- Thesis: <https://oaktrust.library.tamu.edu/handle/1969.1/196539>

CHELAK Medical Solution INC., Houston, TX

June – August, 2021

Software technician

- Built a 16-channel patient electrophysiological **data acquisition system** using an arbitrary waveform generator and DAQ.
- Developed an algorithm for data acquisition using **LabView**.