

Yuzhu Dong

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EDUCATION

Nanjing University

B.S. in Astronomy and Space Science, Cumulative GPA: 3.33/4

July 2015

Jiangsu, CN

University of Florida

M.S. in Electrical and Computer Engineering, GPA: 3.77/4

May 2017

Gainesville, FL

University of Florida

PhD. in Human Centered Computing, GPA: 3.77/4

May 2021

Gainesville, FL

TECHNICAL SKILLS

Languages: C, C++, C#, Java, Python(intermediate), Prolog

Tools&API: MATLAB(proficient), Unity(proficient), 3D max, OpenGL, OpenCV, Maya, Solidworks(intermediate),

PROFESSIONAL EXPERIENCE

Enfoglobe Co.,Ltd

January 2016 -April 2016

Intern

Gainesville, FL

- Developed virtual reality application in Unity 3D for histology study that allowed user go inside the organ/cell.
- Implemented analytical mechanics in the C# script of capsule's motion control for keyboard and gamepad users.
- Visualizing MRI and CT scans with 3D Volume Rendering using Ray marching that allow users to see the integrate organ and manipulate intersections they pick with leap motion control.

Shanghai Observatory

July 2014-August 2014

Research Assistant

Shanghai, CN

- Worked with a team of programmers to optimize MATLAB algorithm for estimating GNSS satellite and receiver differential code biases under extreme condition like sun storm.
- Responsible for analyzing data of total electron content in earth's ionosphere using dual-frequency observations.

PROJECT EXPERIENCE

Style Translation from Adult Motion to Child Motion (funded by NSF)

September 2016- now

- Transformed adult motion to create child-like motions in MATLAB for game play based on motion capture data.
- Retargeting transformed motion to child avatar and conduct perceptual study to see if they can be perceived as child motion by naïve viewers based on point light display.

Generating Face Model in OpenGL

November 2016-December 2016

- Automated fit control mesh to the imported face model via ray casting. Attached texture with proper UV mapping.
- Subdivided control mesh and rendered bi-cubic Bezier smooth surface. Control points can be exported and loaded.

Hashtag Counter using Fibonacci Heap

October 2016- November 2016

- Built Fibonacci heap data structure from scratch in Java. Implemented it with Hash table to find the n most popular hashtags appeared on Social media. The program is able to handle 1 million hashtags.

Pattern Classification in Computed Tomography

March 2016- April 2016

- Classified a large amount of CT images into different body part based on supervised machine learning technique.
- Employed maximum-likelihood classification algorithm in MATLAB with accuracy of 97%.

Polluted Future World Game in VR(Technical Award for Grad Student Project)

March 2016-April 2016

- Designed and developed a VR experience for accelerating future in three level in Unity 3D.
- Animated and enable characters to interact with users in C# script. Deployed on Oculus.

Natural language Analyzing Machine Intelligence

January 2016-February 2016

- Applied grammar rule to analyze thematic role and display parse tree for sentences with Prolog.

Trainable Artificial Intelligence System

September 2015-December 2015

- Segmented and recognized object from real time frame, applying SURF method and BF matcher with Open CV.
- Restored and retrieved object's image in database and compared when the new object showed to the sensor under the instruction of human voice with CMU Sphinx toolkit.

Celestial Mechanics

January 2015-June 2015

- Programed for calculating the parameter of a Heliosynchronous repeating satellite orbit parameter based on the need of satellite mission like sub satellite track and period.
- Used STK software to simulate the motion of the satellite. Analyzed the difference of perturbation in the model used in my program and the STK software by visualization.

Space Mission Simulation

April 2014-July 2014

- Researched the feasibility of an original method to help astronaut land on low-gravity condition.
- Created anti-gravity jet bag model and asteroid environment with 3D Max and Maya.