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Curriculum Vitae

EDUCATION

Eberly College of Science , The Pennsylvania State University, State College, PA, USA
B.S. in Computational Statistics
September, 2013-Present

SKILLS

Programming Languages: C++, C, Java, Python, R, Matlab, Octave, MySQL, HTML, CSS, Javascript(jQuery, NodeJS)
Software: SageMath, Git, Amazon Web Services(AWS), Illustrator, InDesign, Maya, Zbrush, Rhino, AutoCAD, Processing.
Hardware: 3D Printing, Laser Cutting, CNC Machine.
Embedded Systems: Odroid, FPGA, Arduino, Raspberry PI, Intel NUC.

LEADERSHIP/EXPERIENCE

From Jan 2016 to Present
3D Models Designing and Printing In Translational Neuroimaging and Systems Neuroscience Lab
I joined Dr.Zhang's lab at the 2016 for assisting the 3D printings. My interests are in brain structure, neuroscience, and optics. Working in the lab enables me to learn more about mathematical models that predict human brain's' functional connectivities by analysing the data obtained from the mice's brain with the MRI machine.

- Designing 3D Models for Mice's Brain Structure
- Researching the Changes of Brain Structure from Small Mice to Adult Mice
- Image Processing for the Magnetic Resonance Imaging-Brain

From 2015 to Present
Embedded Systems Lead of Penn State Unmanned Aerial System
Penn State Unmanned Aerial Systems(UAS) aims to design the best drones in the world. We compete at the AUVSI SUAS competition. As the Embedded Systems Lead, my role is to have the hardware and mechanical parts function.

From 2015 to Present

Cofounder of MIDAS(Medical Image Analysis)

The goal of Medical Image Analysis is to provide the user the service of looking into the literature and publications. Visualizing the relation of the reference sources in the paper, the user is enabled to understand the structure and the content of the paper better.

From 2015.10 to Present

Game Designer For The Team of Dr. Elisabeth Whyte in Physcology College

Dr. Whyte is working the educational game for the children. As a game designed in the team, my role is to design the environment from the scratch. By using the 3D modeling tools like Maya, I will need to design all the assets, including the human character and other items.

From 2013 to 2014

Web Team Coordinator of Chinese Association of Student And Scholarship of Penn State(PSU-CSSA)

The CSSA is a Chinese Student Association, which aims to provide the Chinese International Students all sorts of students' activities. As the Web Team Coordinator, my role is to lead the Web Dev Department to design and maintain the Homepage and the Online Forum for the association. Also, I am in charge of the mailist, database, and the server of the Forum.

PROJECTS

TOUCH AND TRIGGLE

Category: Interactive Design

Keywords: #Java #Interactive #Single_board_controller

The inspiration of this project comes from the ancient instrument, Water bowl. When the musician plays with the water, the sounds of water from different container can be composited This installation works with Arduino. It an instrument that can detects the gesture of touching water. By playing with the water, the participant can produce music sound.

BOUNCING MACHINE

Category: Physical Computing

Keywords: #Java #Trampoline #Single_board_controller #Bouncing

Attaching the pressure sensor to the surface of the trampoline, the installation can enable the user jump to activate the game. When the user jump, the pressure sensor can detect this behavior, and the creature in the game can be charged, otherwise, without the input of bouncing, the creature

will die because of out of electricity. The visualization of the creature is purely generated by coding in Java.

NARCISSUS
Category: Interactive Design
Keywords: #Kinect #Java
Collaborating the Kinect and Projection mapping, it is an project for reflecting the self-obsession. The participant can see his or her shadow surrounded by the misty and foggy environment, for the sake of curiousity, when the participant stretches out to wipe out the cloud and dust, the shadow gets clearer, yet, to the certain limit, when the participant becomes to appreciate the shadow, and tries to wipe more, the gesture of wiping starts to destroy the shadow, which means, when self-obsession goes beyond the control, it can hurtful and harmful.

CAMPUSPEDIA
Category: Mobile Game
Keywords: #C++ #Campus_Guide
It is a game designed for assisting people to get familiar with the campus. The gaming environment looks similar to the real campus. The game engine used is Cocos-2dx, and the language used is C++. Only the students to the staff with college email can access the game, which guarantee that people you meet in the game have reliable identity.

THE ALCHEMIST
Category: Unity 2D Game
Keywords: #Unity #C# #Javascript
This is a 2D game designed with Unity. Basically, it is a puzzle game with various difficulty levels. The gamer can obtain more gold and treasure if he can make it to go through as many levels as possible.

The UI
Category: Puzzle Game
Keywords: #Kinect #Projection_Mapping
It is an installation that combines the technology of projection mapping and the gesture detection. The participant can interact with the UI, which is physically cutted out by the CNC

machine. And with only the movements of the gesture, he can control and UI and navigate around in the built in 3D gaming environment.

THE EDUCATIONAL GAME
Category: Educational Game
Keywords: #Eye-tracker #Unity
It is an educational game lead by Dr.Whyte. The game uses the eye-tracker to detect the eye movements. Playing a role of artist in the team, I need to set up the storyline and design all the assets for the game environment. Also, I will need to design the human character for the game.

LITERATURE INSPECTOR
Category: Image Processing
Keywords: #Image Processing #Machine Learning #Medical Image Analysis
We are intended to build up an web application, which enables the user to look into the publications and literatures. The user can upload the paper that he or she wants to read, and the program will do text extraction first, and then use image processing to analyze the reference list. So the relation of the referred resources can be obtained. As a result, the user will have a better understanding of the structure and the content of the publication.

VOICE COMMAND FOR VIRTUAL REALITY GAME
Category: Hardware, Speech Recognition
Keywords: #Virtual_Reality #Personal_Assistant #Speech_Recognition
Working on the speech recognition, we will have the single-board computer attached to the virtual game headset, so that the tool like oculus rift kit will no longer need to plug into the computer to play. And it will be much more handy for the user to move around when playing the game. Also, with the voice command, the player can have more approaches to control the game. For example, when playing the game, the player can use the voice to give the command to the henchman, which enables the player to control the game not only by using the mouse and keyboard, but also by giving out command by speaking.

URBANIZATION
Category: Architecture
Keywords: Parametric Design

I have attended the 2014 AA Shanghai Parametric Design Workshop. The tutor for our team is Mary Polites, who is the senior architect of Martha Schwartz Partners Company. The urbanization problem we have worked on is to design the communities with flowing open space. we picked up one old district of Shanghai City, where is of high density of population and traditional buildings. Then, we did the analysis of the buildings and residents for this specific place. For each small communities, we set up the attractors in the center with various size of serving radius. According to different sizes of the block, the serving radiuses are different, and each block is endowed with open space,which is located at the center of each small community, and the they are all linked with each other to form a whole network. The roads connecting small blocks are secondary roads in the road system hierarchies. The main roads are the boundary of the communities.

PARKING LOT FOR SUBWAY

Category: Architecture

Keywords: #Parametric Design #Rhino #Zbrush #Processing

I have attended the 2014 Parametric Design workshop by Tsinghua University. The tutor for our team is David Gerber, who is the professor of Southern California University. Our goal is to design a new parking lot for the Subway in Wudaokou area of Beijing. The issue is that there are lots of students living in this area, but not enough parking space. Firstly, our team worked together to do the analysis of the structure of the surrounding road systems. As a result, our team selected my design as the final work, because I thought, instead of designing one separate building, it is better to do a parking system with one main parking building and several parking lots at the intersections of the roads,so that more space can be used. To complete the whole project, we first used Rhino with Grasshopper to design the shell of the parking lot, then we imported the shape into Processing to do the data analysis. Finally, we used ZBrush to generate the model of the parking system.

URBAN FACE

Category: Design, Art

Keywords: 3D modeling, Art piece

For this art piece, I have used the paper cut from the random magazines and newspaper. By collecting the brand logo and interesting shapes, I build up the city with all sorts of building blocks. Unlike the traditional paper cut, which is 2-dimensional, the urban map I have created can be viewed from different perspective. And in all, it is a human face look, because I would like to show that the urban map of the city sometimes can be in very interesting shape. And the building blocks are just like the features of the face.

ACTIVITIES

2014 CodePSU
2015 CodePSU
2014 Thon Canning
2015 Thon Canning

COURSE TAKEN

Machine Learning(Stanford University) by Andrew Ng
OpenCV Computer Vision Application Programming by Packt Publishing
Getting Started with VR in Unity by Digital Tutors