

HANJIE (HOLLIS) LIU

hanjiel@clemson.edu - (315) 704-9187 - hollisliu.com - 985 Whitechapel Rd, Seneca, SC 29678

EXPERIENCE

- Data Driven Bioscience (Y Combinator S18)** Durham, NC
Software Engineer, Internship, Pathology Info Rapid Entry Tool June 2020 - August 2020
- Implemented contextual auto-fill and all-keyboard workflow for optimal data entry efficiency
 - User feedback states an 150% boost in data entry speed (website developed with Angular and Django)
 - Designed and built a companion data viewer with a backend that supports local paging, sorting and search
 - Optimized the backend so that retrieving 1k complex relational records takes under 2 seconds
 - Built a Python tool that converts existing spreadsheet data into relational database for powerful querying
- Clemson University** Clemson, SC
Research Assistant, advised by Dr. Jerry Tessendorf May 2019 - present
- Integrating OpenFOAM with in-house renderer for **engineering purpose simulation**
 - Implementing techniques to capture 3D volume and color via series of simultaneously taken images
- Graduate Teaching Assistant*: Host lab sessions and write automated grading scripts August 2018 - present
- Drexel University** Philadelphia, PA
Research Assistant, PFI:AIR (NSF Award #1640366) a **3D Model Matching Project** July 2017 - May 2018
- Designed a mesh alignment technique as well as conversion algorithms for mesh to levelset (C++)
 - Built an iOS app that converts a depth photo of an object into a 3D mesh for shape matching
- Research Assistant*, **an Eye Tracking Project & an Image Analysis Project** March 2016 - September 2017
- Architected a two machine eye tracking solution using sockets aiming to reduce distraction for subjects
 - Built a visual stimuli generator for testing human visual search capabilities (Python)
 - Developed slide image segmentation algorithms to help diagnosing prostate cancer
- SAP America** Newtown Square, PA
QA Engineer, Internship March 2015 - September 2015
- Efficiently tested SAP internal software releases, including the global rollout of Windows 10
 - Wrote comprehensive test cases based on requirement documents from upper management
 - Led a 6-person development project building an inventory monitoring site with ASP.NET and SQL Server

PERSONAL PROJECTS

Github: hollisliu

- Spread**, an iOS App (on App Store) April 2016 - Present
- A to-do list iOS app that organizes tasks as conveniently and efficiently as sticky notes
 - Re-written and published in 2020 with Swift 5, Core Data and new API support for best performance
- ARKit Facial Expression Capturing** April 2019
- A final project iOS ARKit app to capture and save facial expression raw mesh data (Swift)
 - Built a mesh processing pipeline with Python and Blender to recreate facial animation in Unity
- Spacetime Rhapsody**, Swift Playground & iOS App (on Github) April 2017
- An interactive 3D app that helps users understand the effect of gravity outlined by General Relativity
 - Utilizes touch controls, SceneKit graphics and physics engine to render an intuitive interactive space model
- iOS Vision Text Detection Demo** (on Github with 112 stars) June 2017
- A sample app showcasing the text detection feature in iOS Vision framework
 - Takes live video feed and draws boxes around text detected in real time

EDUCATION

- Clemson University**, Clemson, SC August 2018 - present, Ph.D. expected 2023
Ph.D., Computer Science GPA: 3.13/4.00
- Coursework: Physically Based Simulation, Network Science, HPC Tolerance, Tangible TEI, Machine Learning
- Drexel University**, Philadelphia, PA Graduated: June 2018
B.S., Computer Science, Minor Mathematics GPA 3.36/4.00
- Pennoni Honors Student, Undergraduate Outstanding Research Award in Computer Science

Programing Skills: C++, Python, Angular, Swift, iOS Dev, Java, \LaTeX , OpenVDB, OpenGL, Blender, Unity

AWARDS & ACTIVITIES

- Apple WWDC Student Scholarship Recipient (around 5% acceptance rate) - May 2016
- U.S. Software Copyright for *HSV Analysis of SIGMA 1*. Registration# TXu002073424. 10-30-2017
- Vice Chair, Math and Computer Science Society (ACM chapter at Drexel), 2014 - 2016
- First Violin, Clemson University Symphony Orchestra, Clemson String Quartet, Drexel Symphony Orchestra