New York, NY 10025

Gillian Reyes

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Education

Yale University New Haven, CT
B.S. Mathematics and Computer Science 2020
Relevant Coursework: Computer Graphics; Advanced Computer Graphics; Physics Simulations in Movies, Games, and Fabrications; Data Structures; Vector Calculus and Linear Algebra I; Abstract Algebra; Fields and Galois Theory; Discrete Mathematics; Differential Equations;

Work Experience

Asset Management Quantitative Strategist at Goldman Sachs– New York, NY
July 2020 to Present
- Lead the ongoing automation project for Private Equity Portfolio Construction, where we streamline the investment allocation process which previously lived in excel and create reports breaking down current and hypothetical portfolios
- Collaborate with engineering teams to develop data APIs, and meet with Portfolio Managers to discuss our analytics
- Contribute to and support our team's SLang codebase, which queries, processes, caches, and analyzes data in reports and web-based interactive tools for three business verticals (Long Only, Hedge Fund, and Private Equity)

Asset Management Quantitative Strategist Intern at Goldman Sachs– New York, NY
May 2019 to August 2019
- Developed analysis and visualization web tools for the Private Equity side of the Alternative Investments and Manager Selection group
- Learned SLang, Goldman's proprietary language, completed three webtool projects, and pushed to production for business use

Quantitative Research Summer Analyst at Landmark Partners – Simsbury, CT
June 2018 to February 2019
- Created R code-base from scratch to help the research team investigate the persistence of alpha generation in private equity
- Analyzed the performance of private equity managers and produce alpha estimates for all outstanding funds

Projects

A Tensor Algebraic Approach to Reduced-Order St. Venant-Kirchhoff Deformations May 2020 (Advisor: Theodore Kim, PhD)
- Expanded on the Chaotic Blobs project below and implemented an alternative approach to reduce the order of Euler-Lagrange equations of motion proposed in Barbic's 2005 paper
- Proposed tensor algebraic internal force and stiffness matrix polynomials, which, unlike the Finite Element Method, can be extended to different kinds of deformations
- Following my graduation, I began research with Professor Kim to implement tensor algebraic polynomials for Neo-Hookean deformations. This research remains unfinished. This project was written in C++ and OpenGL

Chaotic Blobs December 2019 / CPSC 679: Physics Simulations in Movies, Games, and Fabrications
- An implementation of Barbic's 2005 paper Real-Time Subspace Integration for St. Venant-Kirchhoff Deformable Models, with the addition of motion. This project was written in C++ and OpenGL

Shadow Hunters May 2019 / CPSC 439: Software Engineering (https://shadowhunters.live/)
- Worked on a student team to turn the board game, Shadow Hunters, into an online, multiplayer hidden-roles game
- Led the front-end development, creating all the visuals with Javascript's Phaser library, and connecting it to our python backend through websockets
- Drew the character art based on the cards contained in the physical game

Happy Blob Animation through Blender Scripts May 2019 / CPSC 479: Advanced Computer Graphics
- Created a short animation of three blobs hanging out in a living room
- Built blender scripts using my own implementations of particle systems, L-systems, sweeping, and scripted motion

WebGL Cake-finder Game December 2018 / CPSC 478: Computer Graphics
- Created a 3D horror game written in WebGL, Javascript, and HTML, using Ganovelli's "Introduction to Computer Graphics: a Practical Learning Approach" envymycar code as a base
- Implemented collision detections and a hierarchy of movement (to simulate a walking human)

Skills

Computer Skills: C, C++, Javascript, Python, Java, Blender, Maya, WebGL (limited), OpenGL (limited), MEL (limited), R, HTML and CSS, Racket, Photoshop. **Currently Learning:** Houdini, Unity
Language: limited working proficiency in Spanish, elementary proficiency in German
Other: Drawing and Painting, Running, Broomball. Favorite Movie: Coco