Catherine Yang

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PROFESSIONAL EXPERIENCE

DreamWorks Animation, Glendale, CA — Jun 2019 – Present
Technical Resource Administrator
- Write, test, and integrate Python tools and scripts to automate render farm workflows and track and analyze farm performance
- Provide 24/7 monitoring of farm of 2000+ servers and troubleshooting for failed renders to ensure maximum render throughput for each production throughout the pipeline
- Collaborate cross-functionally with artists, TDs, and engineering teams to isolate and resolve render and server issues, as well as to maximize farm resource efficiency across productions on a daily basis
- Independently led projects to run test shots on Azure nodes and validate production inventory in the cloud, coordinated with production and engineering teams to ensure successful cloud renders, organized Azure performance results with a goal of expanding farm capacity
- Coordinated team response to several large-scale P1 issues that prevented throughput of renders on the farm

Nickelodeon Animation Studio, Burbank, CA — Jun 2018 – Aug 2018
Animation Technology Intern
- Worked with Animation Technology team and TDs to support productions, customize tools and databases
- Developed and customized Python tools for 2D and CG productions, including Shotgun action to copy delivery files to servers, PyQt tool to record lists of files, Shotgun plugin to push metadata to database
- Created FileMaker dashboard to centralize access to FileMaker systems and related Python scripts and Shotgun records, used dashboard to troubleshoot workflows
- Updated Python modules used in production and wrote extensive unit tests

Paramount Pictures, Hollywood, CA — Jun 2017 – Aug 2017
Worldwide Technical Operations & Servicing Intern
- Developed and tested newly launched screener site and corresponding iOS and Android mobile apps
- Spearheaded independent projects to improve screener site, including organizing thousands of site users and optimizing processes to manage growing number of users and site content
- Assisted team with servicing requests and processed weekly requests between team and platform developers

EDUCATION

University of Pennsylvania, School of Engineering and Applied Science — Philadelphia, PA
Bachelor of Science in Engineering, Computer and Information Science Department — May 2019
Major: Digital Media Design, *Minor*: Fine Arts
Coursework: Advanced Computer Graphics, Computer Animation, Procedural Computer Graphics, 3D Computer Modeling, Digital Figure Modeling, Software Design, Data Structures & Algorithms

SKILLS

Programming Languages: *Experienced:* Python, Java, C++, JavaScript; *Familiar:* C, C#, OCaml, HTML/CSS
Software & Programs: Maya, Jira, WebGL, FileMaker Pro, Shotgun, PyQt, Git, Blender, Unity, Photoshop, ZBrush

PROJECTS

Physically Based Rendering
- Built Monte Carlo path tracer, photon mapper, and ray tracer using C++ and OpenGL and implemented direct lighting, global illumination, multiple importance sampling, refractive and reflective materials, k-d trees

Procedural Graphics
- Created procedurally generated environments (ex. terrains, roads, and coral reefs) with Javascript and WebGL
- Experimented with shaders, noisy functions, SDFs, raymarching, lighting, L-systems

Lego Construction
- Designed JavaScript program to generate Lego brick models given an input mesh, created an interactive environment to build virtual Legos, constructed building algorithm to more efficiently design Lego structures