karalynn**bressler**

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EDUCATION

Princeton University | NJ   **2015 – 2019**
- Computer Science, Bachelor of Science in Engineering; Certificate in Visual Arts / Graphic Design
- Selected coursework: Computer Graphics, Advanced Computer Graphics, Typography, Gestalt, Interface Design

Community School of Naples | **FL**   **2011 – 2015**
- Valedictorian, Activities: President of Math Club and Art Club, Varsity Basketball, Programming Team

Schrenk Photography Institute | FL   **2010 – 2015**
- Intensive photography program taught by University of Miami professor; exhibited yearly at Artis Naples museum

WORK EXPERIENCE

DreamWorks Animation, Feature Film | **Lighting Technical Director**   **Fall 2019 – present**
- Debugging issues with pipeline and lighting/compositing software for Crood 2 lighting artists | Houdini, Nuke
- Programming tools to streamline department workflows | Python

SIGGRAPH | **Student Volunteer**   **Summer 2019**

Microsoft, Windows Core | **Technical PM Intern**   **Summer 2018**
- Spearheaded effort creating compelling visual integration of 3D models in Windows compositor
- Researched and helped implement 3D lighting scenarios for public-facing Windows.UI.Composition API
- Developed applications to demo 3D lighting scenarios and evangelize API contributions | C#, XAML

Dexter Sinister / O-R-G | **Graphic Designer**   **2018 – 2019**
- Designed printed layouts / developed graphic work for 3D mock-ups at small NYC studio | Processing, Python

Outdoor Action | **Outdoor Educator**   **2016 – 2019**
- Led ten, week-long canoe and backpacking trips focused on soft skills and experiental leadership development
- Collaboriatively developed curriculum and taught courses in Leave No Trace ethics and Wilderness First Aid

Microsoft, AI and Research | **Software Engineering Intern**   **Summer 2017**
- Developed extension for Jupyter Notebook open source community | Python, JavaScript
- Created design and spec for tool onboarding access to deep learning GPU cluster

SKILLS

Graphics Software | **Houdini, Nuke, Photoshop, Illustrator, InDesign, Lightroom, Processing, Glyphs**
Languages | **Python, Java, C++, GLSL**

INDEPENDENT PROJECTS

Topography Typography | letterform detection and typeface creation from arbitrary satellite imagery | Python, TensorFlow
Photon Mapping | implemented global illumination algorithm including caustics and a participating medium | C++
Fur Rendering | implemented fur shader for arbitrary surfaces in real-time with shaders and fins algorithm | Three.js, GLSL
Snowflakes | programmatically-generated snowflakes accompanying logic and patterns by artist Joe Scanlan | Processing

RECENT EXHIBITIONS

Light Shards | site-specific series of murals serving as documentation of ephemeral sunlight patterns | Hurley Gallery | 2019
CAUSTICS | solo thesis exhibition engaging with data collection & embodied language | Princeton University | 2019
Public Lands, Private Hands | typographic installation accompanying event elevating native voices | Princeton CoLab | 2019

HONORS AND AWARDS

Lucas Award in Visual Arts | Princeton University | 2019
Creative Leadership Award for Facilitation | Princeton Office of the Dean of Undergraduate Students | 2019
Book Award for Studies in Media Theory | Princeton German Department | 2019
Best Poster for Independent Work Research | Princeton Computer Science Department | 2018
Berl & Berl Senior Thesis Research Award | Princeton Lewis Center for the Arts | 2018
Gold Key for Visual Artwork | Scholastic Arts & Writing Awards | 2015
Jane N. Reidel College Scholarship | The von Liebig Art Center | 2014
Juried Grand Prize Winner | Visual Voices International Photography Exhibit | 2013