Yaorui Zhang
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EDUCATION

- **Dartmouth College, Computer Science / Digital Art**　　　　　　Sep. 2019 – Present
  Master of Science, Department of Computer Science; Expect to graduate in June 2021　　*Hanover, New Hampshire*

- **Zhejiang University, Digital Media Technology**　　　　　　Aug. 2015 – June 2019
  Bachelor of Engineering, College of Computer Science and Technology;　　*Hangzhou, China*
    - **Grade**: Overall GPA: 3.85 / 4.0. Major GPA: 3.95 / 4.0

INTERNSHIP

- **Front-end Engineer**　　　　　　Sep. 2020 - Dec. 2020
  IES (Interactive Entertainment Social), ByteDance　　*Shanghai, China*
    - Participated in the development and maintenance of Douyin Open Platform and Creator Platform using React
    - Developed templates to display usage examples (config with JSON); Used local storage to improve performance
    - Used Ant Design to create forms of an information editing and a feedback page; Used ECharts to create graphs for a quota usage page

PROJECTS

- **A Chrome extension to manage tabs(2ManyTabz)**, *Teamwork*　　　　　　May 2020 - June 2020
    - Implemented the UI of the popup page using React; Data is stored in the background and managed with Redux
    - Read and managed tabs through the Tabs API provided by Chrome, calling from the background page
    - Developed API of the server using Express & MongoDB; respond to frontend requests and modify users' favorites

- **A web based painting tool**, *Individual Work*　　　　　　May 2020 - June 2020
    - The tool allows for loading pictures, drawing curves/ polygons/ discrete points, using native JS
    - Implemented a manager class to create, delete, hide/show and switch layers; Layers are drawn by canvas functions
    - Integrated this application with TetGen to generate triangular meshes from contours; Implemented mesh coloring

- **Photo realistic rendering**, *Individual Work*　　　　　　Oct 2019 - Nov. 2019
    - Implemented path tracing, importance sampling, photon mapping, etc., enabling rendering of common-used materials including Lambertian, Phong, Blinn-Phong, Dielectric, Metal as well as blending materials using C++.
    - Modeled and set up a final scene to test the program; Won the third prize in the Rendering Competition in class.

- **VR game of underwater exploration (Deep DiVR)**, *Teamwork*　　　　　　Oct 2019 - Nov. 2019
    - Modeled the environment and animated props in Maya; optimized meshes to allow for efficient rendering.
    - Overcame the difficulty of limited material settings in LWRP; used multiple approaches to texture objects
    - Created the translation animation both within a Unity scene and between scenes, using C#
    - Explored on a school-wide Technigala and players commented it as "immersive"

- **Research on human sensitivity to slopes of slant paths**, *Teamwork->Developer*　　July 2018 - Nov. 2018
    - Created 2 virtual experimental scenes working together with physical objects to explore to what extent visual factors affect people's sensation of slopes
    - Developed an escape room game utilizing the finding from the experiments as the demonstration of our result
    - Published a paper, "Human Sensitivity to Slopes of Slanted Paths" on IEEE VR 2019:984-985

- **Book management system**, *Individual Work*　　　　　　Apr. 2016 - May 2016
    - Built a simple system with Qt to manage the information of books, users and borrowing records
    - Developed the whole program in C++. Stored and processed the data with a SQL Server Database

LEADERSHIP & ACTIVITIES

- **Teaching assistant**: In a smartphone programming course, helped students with their homework
- **Volunteer**: Taught young students at a Secondary School in Nepal; was commented as 'energetic' by local teachers
- **Leadership**: Served as the director of the Office in the Students' Association Union & the deputy director of the Visual Designing Workshop in GOA, an environmental protection association

SKILLS

- **Programming & Developing**: C/C++, html, CSS, JavaScript, React, Unity 3D, Android Studio
- **Other Software**: Maya, Photoshop; Premier