Hayun Chong

7724 Lerner Hall, 2920 Broadway New York, NY 10027
(703) 965-0564 • hc2978@columbia.edu • www.hayunchong.com

EDUCATION

Columbia University, *The Fu Foundation School of Engineering and Applied Science* New York, New York
- **Major:** B.S. in Computer Science (Vision and Graphics Track). **GPA: 3.91** *Sept 2017 – May 2021*
- **Coursework:** Computer Vision, Computer Graphics, User Interface Design, Artificial Intelligence, Machine Learning

EXPERIENCE

Creative Machines Lab, Columbia University New York, New York
Research Assistant *Jan – Aug 2020*
- Implemented a GUI for an opensource Ultrasound system to allow for user-friendly interactions with a 3D image.
- Redesigned the OpenGL rendering pipeline speed from 20FPS to 60FPS to draw a 1 million point cloud by utilizing geometry shaders and GPU memory.
- Established connection between the rendering and data collection using multi-threading for real-time interactions.
- Leveraged knowledge in C++, Git, OpenGL, GLSL

LivePitch (startup) New York, New York
Software Developer *Oct 2019 – Jan 2020*
- Restructured checkout logic and designed UI features for the shopping cart using React.
- Integrated calls to an updated database to save and receive user data by connecting the app to Firebase.
- Leveraged knowledge in React Native, Javascript, Firebase

Amazon Seattle, Washington
Software Development Engineer Intern *May – Aug 2019*
- Implemented and shipped precautionary error handling technology to short-circuit outdated functions automatically.
- Optimized data storage on AWS by over 30% by restructuring repeated object data storage.
- Established method of remote connection to allow for easy debugging by using a web server to make live requests.
- Leveraged knowledge in Git, Java, AWS

SIDE PROJECTS

Personal Website: www.hayunchong.com (for additional information and projects)

Rubik's Cube Interactive (https://rubiks-interactive.herokuapp.com/)
- Developed an interactive graphics website using THREE.js to interactively teach users to solve a 2x2 Rubik's Cube.
- Implemented 3D interactions and animations for camera movement and manipulation of the Rubik's Cube.
- Utilized: Python, Flask, Heroku, JavaScript, THREE.js, jQuery, HTML/CSS, GIT

COVID-19 Chest X-ray Classifier
- Created a multi-class classifier to diagnose COVID-19 and pneumonia cases from chest X-rays using a CNN.
- Utilized: Python, Numpy, OpenCV

Underwater Multiplayer Unity Game
- Created an 3D underwater multiplayer game using Unity, C#, and Blender where players interact by changing each other's gravity to avoid obstacles and race to the finish line.
- Worked with a team of 4 students through the Columbia Game Development club.
- Utilized: Unity, C#, Blender

HONORS AND ACTIVITIES

- **Course Assistant, Columbia University**: Computer Graphics (COMS 4160) - Spring 2020, Fundamentals of Computer Systems (CSEE 3827) - Fall 2019
- **Columbia Virtual Campus**: UI Designer for Columbia Virtual Campus, a website created to foster a sense of campus community during the pandemic.
- **Game Development Club**: Project leader and member.
- **CP Davis Scholar**: Top 10% of incoming class in 2017 in Columbia University.
- **Tau Beta Pi**: NYA Chapter (Inducted Fall 2019)

SKILLS

Proficient: Python, Java, Git, HTML/CSS, Javascript, C++ *Familiar:* Unity, C#, OpenGL, GLSL, React