

MOHAR KALRA

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SUMMARY

Design-oriented engineering student and artist fascinated by technology's ability to transform the way people interact with their world. Recognized for curiosity and initiative in internships and interactive media research. Seeking to leverage proven technical, aesthetic and management skills to develop meaningful interactive experiences that enrich each user's reality.

EDUCATION

Columbia University in the City of New York

New York, NY

- Bachelor of Science in Electrical Engineering; GPA: 3.97

May 2021

Georgia Institute of Technology

Atlanta, GA

- Bachelor of Science in Electrical Engineering; GPA: 4.00

August 2017 – May 2018

WORK EXPERIENCE

COMPUTER ENABLED ABILITIES LAB

New York, NY

Student Researcher under Dr. Brian Smith

May 2020 – Present

- Redesign Unity game environment and Parse backend to improve experimental design testing novel blind navigation tools
- Facilitate 10 user studies with blind users and wrote Python scripts to analyze resulting data for CHI conference paper

BARNARD MOVEMENT LAB

New York, NY

Student Artist-in-Residence under Guy Delancey

September 2019 – Present

- Design AR iOS experience in Unity using C# and Python scripts to explore how users interact with their physical world
- Built pair of goggles by reprogramming transparent OLEDs using Arduino and C to create novel visual experiences
- Built kinetic sculpture that serially receives bitmap images from python script communicating with js chrome extension
- Built electronic comic book using ATtiny that mechanically locks open until every page is read in order

MORPHOLIO APPS

New York, NY

Independent Contractor

September 2018 – Present

- Design Swift tool and UI to provide support for 29 new 3D model filetypes to be imported into Morpholio Trace app

KONRAD GROUP

New York, NY

Associate Consultant Intern

May 2019 – August 2019

- Designed and strategized product roadmaps for 2 Fortune 100 clients' digital portals, websites and mobile apps
- Performed and analyzed 70+ user interviews to develop 5 prototypes and product requirements for client projects

JABIL, INC

St. Petersburg, FL

Electrical Design Engineering Intern

May 2018 – August 2018

- Designed, analyzed, programmed, tested and troubleshot four PCBs to meet client requirements for consumer appliances
- Designed, inventoried and constructed 20+ electrical harnesses for high fidelity prototype of home appliance for client

LEADERSHIP

COLUMBIA UNIVERSITY RESIDENTIAL LIFE

New York, NY

Residential Advisor

September 2019 – Present

- Counseled and nurtured floor community of 32 Columbia students to help them better acclimate to life on campus

RATROCK MAGAZINE

New York, NY

Webmaster / Columbia University Undergraduate Arts Magazine

November 2018 – Present

- Design and manage content on Ratrock's Squarespace page to best provide an online platform for student artists

SKILLS

Engineering: IoT, SolidWorks, digital system design, analog circuit design, motion-capture, PCB debugging, Raspberry Pi, PCB design, electronics testing and verification, PCB assembly, Altium Designer, digital image processing, oscilloscope, Spice

Programming: open frameworks, C, C++, Swift, ARKit, data structures, CSS, HTML, Python, Java, Matlab, Javascript, UNIX, C#, Unity scripting, Blender scripting, computer networking, Arduino, HTTP, TCP/IP, javascript

Communication: User research, Product design, Technical document writing, data presentation, public speaking, Word, Excel, Powerpoint, event planning

Arts: Sequential art, graphic design, illustration, film production, screenwriting, directing, Adobe Creative Suite, Sketch

Languages: English (Native), Spanish (Intermediate)