Justin B. **Christensen**

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Education

Massachusetts Institute of Technology — *Cambridge, MA*

Masters of Science, Media Arts and Sciences — *September 2019 - May 2021*

- Overall GPA: 5.0/5.0
- Course Work: Optical Imaging Devices and Systems, Science Fiction-Inspired Envisioneering and Futurecrafting

Brigham Young University — *Provo, UT*

Bachelor of Science, Electrical Engineering — *August 2015 - April 2019*

- Overall GPA: 3.83/4.00
- Minor in Japanese and Mathematics
- *Heritage* and *New Century* Academic Scholarships
- Course Work: Holography, Optical Engineering, Electromagnetic Radiation and Propagation, Semiconductor Devices, Integrated Circuit Development Lab, Electronic Circuit Design, Control Systems, Embedded System Programming, Data Structures and Algorithms, Discrete Structures

Experience

MIT Media Lab — *Cambridge, MA*

Research Assistant — *September 2019 - Present*

- Explore holography and other three-dimensional display technologies to create immersive and interactive experiences.
- Discover new ways to assemble and manufacture optical equipment that is more affordable and customizeable.

Brigham Young University – Electro-Holography Lab — *Provo, UT*

Research Assistant — *September 2016 - April 2019*

- Designed, fabricated and tested light-bending modulators to produce holographic images in a holographic video monitor.
- Developed skills in optics (lasers, refraction and holography), clean room fabrication (photo-lithography, deposition and etching), and electronic circuit design.
- Co-authored paper based on research and co-invented a patent-pending device.

BYU Electrical and Computer Engineering Department — *Provo, UT*

Teaching Assistant — *September 2017 - April 2019*

- Coached students in debugging code and troubleshooting electronic circuits by helping them find the problem and take the steps to fix it.
- Taught students how to approach embedded system design and how to adhere to proper coding standards.

Intel Corporation — *Hillsboro, OR*

Backend Design Engineering Intern — *May 2018 - August 2018*

- Tweaked and tested different design layouts of owned SoC subsystem partition to improve timing.
- Wrote database parsing script to query and display project status to team members.

Projects

- **HoloGIF:** created a zoetrope-like holographic video device using stop-motion and other film and animation techniques using holograms as a medium; implemented photo interrupter to create strobe light circuit for smoother viewing.
- **Magic Mirror:** placed an image printed as a transparency between a half-silvered mirror and a sheet of retro-reflective material to make a ”magic mirror” that has a hidden image only view-able under bright light such as a camera flash.
- **Fiber Optic Spectrum Analyzer:** worked with Capstone final project team to create a multi-channel fiber optic spectrum analyzer system; utilized my knowledge of optics to implement an optical switch to enable multi-channel functionality without too much added loss.
- **Laser Tag:** designed and wired transmitter and receiver boards for the system, interfaced with the processor and wrote band-pass filter signal processing code, and used embedded systems programming to connect all hardware and software components into a fun and reliable game.

Skills

Programming C++, C, Python, MATLAB, PERL, LaTeX

Software CAD, Photoshop, Illustrator, Microsoft Office

Japanese Speaking: advanced, Writing/Reading: intermediate