

Education

Brigham Young University | Provo, UT | 2020 — 2023

- **Major:** Computer Science, M.S.
- **Coursework:** Computer Vision, Computer Security, Pentesting, UI / UX Design, Advanced Computer Graphics, HCI, Fluid and Foam Simulation, Computational Creativity
- **GPA:** 3.98 / 4.0

Brigham Young University | Provo, UT | 2015 — 2019

- **Major:** Computer Science, B.S.
- **Emphasis:** Animation
- **Minors:** Mathematics and Creative Writing
- **Coursework:** Algorithms & Data Structures, Discrete Math, Web Development, Software Design, Computer Graphics, A.I., Android Development, Shaders, Game Design, Film Production, Systems

Employment

Associate Department Technical Director | DreamWorks Animation | *September 2022 – Present*

- Built software tools in Python for the final layout and animation pipelines. Fixed issues with rendering, Autodesk Maya, and proprietary software.

Research Engineer, Intern | Adobe: RED Lab | *Summer of 2022*

- Used the Trimesh library in Python to engineer digital craft-making software that converts 2D designs into 3D pop-up cards.

Software Engineer, Intern | SimpleNexus | *Summer of 2021*

- As a full-stack developer, I used Ruby on Rails, Vue.js, and GraphQL to improve the mortgage loan application process for borrowers.

Web Developer, Full-Stack | BYU Administrative Services | *September 2020 — May 2022*

- Rewrote the BYU Cell Phones website, which allows faculty and alumni to enroll in custom cell phone plans through the university, using test-driven development, HTML/CSS/JavaScript, and the MEAN stack.

Software Engineer 1 | Sling TV | *May 2019 — June 2020*

- Integrated live and on-demand adaptive video streaming with various hardware platforms using Typescript and the Bitmovin API.

Software Engineer, Intern | Sling TV | *Summer of 2018*

- Ported a standalone video player from JavaScript and AngularJS to Typescript and Angular 6.

Teaching Assistant, Java & Android Development | BYU Computer Science | *August 2016 — April 2019*

- Taught instructive help sessions in data structures, SQLite databases, algorithms, client-server architecture, and mobile application development. Reviewed code and unit tests for quality.

NOC Analyst | BYU Office of Information Technology | *January 2015 — April 2016*

- Used Nagios to monitor alerts and escalate campus network issues. Provided 24/7 technical support to end users.

Software Projects

Slack Message Automater

- Wrote a script in Python that automatically posts video messages to a specified Slack channel.

Alexa Skill: Theme Park Facts

- Created an Alexa skill, using JavaScript and AWS, which gives a random fact about theme parks when prompted.

Photomanipulation Shader

- Wrote a shader in GLSL that changes a photograph to grayscale, negative, sepia, and color.

Path Tracer

- Renderer written in Java.

Video Game: CarniVile

- Coded a first-person shooter video game with Unity and C#, themed to a haunted carnival.

Group Projects

Club President | BYU Theme Park Engineering & Design Club | *October 2018 — Present*

- Led groups of 2-8 students in various engineering/design competitions. Delegated tasks, met deadlines, and created 3D concept art. We qualified for the semifinal round of Disney Imaginations in 2019.

Visual Effects Technical Director | BYU Animation | *January 2018 — May 2022*

- Used Houdini and Python to create fluid, fire, and shatter simulations. Built tools to improve the pipeline.
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