

Erik Ulberg

Portfolio: erikulberg.com
E-mail: ulberge@gmail.com
Phone: (206) 948-3348

Software developer and researcher with a passion for creatively exploring new forms of interaction involving machine learning, computer vision, perception, and visual information.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
M.S. Computational Design | *May 2020*

Carleton College, Northfield, MN
B.A. Computer Science | *June 2009*
Distinction in Major, *magna cum laude*

SKILLS

JS, Python, Java, SQL, HTML, CSS, React,
Node.js, TensorFlow, OpenCV, AWS, D3,
Git, Photoshop, Illustrator

COURSEWORK

Intro to Machine Learning, Computational
Perception, Creative AI

PROJECTS

Crafting the Weights of a Convolutional Neural Network to Make a Drawing

*Combines interactive images, kernels, and
visualizations for hand-crafting a CNN.*

JS, React, TensorFlow

Sketch Repeater

*Predicts future changes to an image based on the
trajectory of changes to its feature embeddings.*

Python, JS, TensorFlow, OpenCV

A Conversation with a Machine

*A conversational AI powered by changes to
feature embeddings of an image.*

Python, JS, TensorFlow

Visual Concepts in Sketch-A-Net

*An interactive explorer of visual concepts within
Sketch-A-Net derived by K-Means clustering.*

Python, JS, TensorFlow, OpenCV

WORK EXPERIENCE

Carnegie Mellon University
Graduate Research Assistant

Pittsburgh, PA
Sept 2019-May 2020
Sept 2018-May 2019

- Led the planning, design, implementation, and deployment of a web-based computer-aided design tool in JS and React.
- Collaborated on a team translating research into prototypes.
- Mentored students on developing experimental design software.

Human-Computer Interaction Institute

Carnegie Mellon University
Summer Research Assistant

Pittsburgh, PA
May 2019-Aug 2019

- Analyzed, processed, and visualized data using JS, React, D3, and TensorFlow.
- Participated in computer vision research leveraging video data from smart classrooms.
- Advised team and mentored junior colleagues on web apps.

Self-Employed

Part-Time Freelance Web Developer

Seattle, WA
June 2014-May 2018

- Designed, developed, and deployed WordPress and Shopify apps using JS, PHP, and SQL.
- Communicated closely with clients to clarify requirements and provide excellent customer service.

Salesforce.com

Senior Member of Technical Staff
Member of Technical Staff
Associate Member of Technical Staff

San Francisco, CA and Seattle, WA
May 2013-Aug 2013
Sept 2011-May 2013
Aug 2009-Sept 2010

- Built features in Java, JS, and SQL for a collaboration tool used by millions of customers.
- Developed a responsive, performant, and cross-platform web UI as part of an Agile team.
- Produced automated UI and integration tests with Selenium.