

# Rebecca Turner

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I am a computer science BS enrolled at Brandeis University passionate about software engineering and art, including graphic design and motion graphics. I'm looking for an internship in software development where I can contribute meaningfully and learn real-world development practices.

## EDUCATION

The New School of Northern Virginia (June 2017, Honors Diploma in computer science awarded) GPA: 3.89 / 4.00

Brandeis (August 2017–May 2021), computer science major GPA: 3.835 / 4.00

Courses include AP Calculus BC, AP Physics (mechanics / electricity and magnetism), COSI 12B Advanced Programming Techniques, and COSI 21A Data Structures and the Fundamentals of Computing.

## DEVELOPMENT

I have extensive experience with Java, Python, C, Javascript, PowerShell, L<sup>A</sup>T<sub>E</sub>X, PHP, HTML 5, CSS 3, and the Microsoft Office suite, and moderate experience with Bash, shell scripting, Ruby, Rust, Go, Wolfram Mathematica, C#, F#, and the .NET API.

I have developed a number of independent software projects.

*I C the Light*, a distance-estimating ray marcher designed to render images of quaternion Julia sets. Written in C.

Github: [9999years/i-c-the-light](https://github.com/9999years/i-c-the-light)

Paper: [becca.000/i-c-the-light.pdf](https://arxiv.org/abs/1805.08111)

*juliaplotter*, a script to render cells or grids of arbitrary Julia sets, to overcome difficulties other renderers have in visualizing the many possible values of the constant  $c$  in the Julia set for a given rational function. Written in plain Python.

Github: [9999years/juliaplotter](https://github.com/9999years/juliaplotter)

*The Daily Report*, a highly-customizable framework for generating daily agendas for use with receipt printers. Capable of reading and processing Google calendars, outputting weather forecasts, countdowns, to-dos, daily news, and other useful information. Currently running on a Raspberry Pi interfacing with a Star thermal receipt printer. Python.

Github: [9999years/daily-report](https://github.com/9999years/daily-report)

*PSVarDump*, a PowerShell module for debugging PowerShell scripts by inspecting variable contents. PowerShell script.

Github: [9999years/PSVarDump](https://github.com/9999years/PSVarDump)

*becca.000/fox*, A program to simulate and visualize the interactions of plant and animal populations in a virtual ecosystem. HTML 5 canvas, Javascript.

*becca.000/glitcher*, an in-browser databending app which procedurally glitches images by modifying their binary data. PHP, Javascript.

*becca.000/integral*, an interactive web app to visualize integral approximations. HTML 5 canvas, Javascript.

*#wrap*, an extension for Google Chrome to wrap Tumblr's hashtag interface to one line, addressing a widely-held annoyance with Tumblr's user interface. As of October 2016, three years after its publication, *#wrap* had 30,315 users. CSS.

*becca.000/mandelbrot*, an interactive web app to explore the Mandelbrot set and visualize incremental values of the underlying sequence at arbitrary points. HTML 5 canvas, Javascript.

Twitter bots such as *@gardensbot*, which posts grids of plant and animal emoji in virtual "gardens" every other hour, and *@goodwordsbot*, which generates fake but plausible English words from Latin and Greek roots. PHP.

## DESIGN / MOTION GRAPHICS

I have experience with Adobe CC suite software (namely Photoshop, Illustrator, and AfterEffects), and Cinema 4D across a variety of fields — I have created vector illustrations, manipulated photos and videos, and created motion graphics from scratch.

A WIRED article ([11 Beautiful, Psychedelic GIFs Created by a Math Whiz](https://www.wired.com/story/11-beautiful-psychedelic-gifs-created-by-a-math-whiz/)) linked to a directory of GIF artists I curate ([gifartists.9999years.com](https://gifartists.9999years.com/)).

Motion graphics reel: [becca.000/reel](https://vimeo.com/becca000/reel)