# Charlie Gagnon

chgagnon.github.io ⋄ github.com/chgagnon ⋄ (508) 654 5359 ⋄ charles_gagnon@brown.edu

## EDUCATION

**Brown University**  September 2018 - May 2022
*Sc.B. – Computer Science*  *Providence, RI*

**Natick High School**  September 2014 - June 2018
*Natick, MA*

## PUBLICLY-HOSTED PROJECTS

**lemonADE20K**  July 2020 (Ongoing)
· Wrote package to manipulate the MIT ADE20K scene segmentation dataset with Python code (instead of the dataset's native MATLAB), for ease of use with TensorFlow

**supercollager**  June 2020
· Wrote Python program to generate photo-mosaics based on a single "target" image and formed from a set of "tile" images
· Created front-end web app to generate mosaics with the browser, using images uploaded to the web page

**James TompGAN**  May 2020
· As a final project for Brown CS 1430 - Computer Vision, implemented NVIDIA's SPADE normalization technique for semantic image synthesis, in TensorFlow instead of PyTorch
· Prepared subsets of the MIT ADE20K dataset to make training and testing deep learning models feasible on limited computing resources

## WORK EXPERIENCE

**Virtual Student Intern**  September 2020 - Present
*National Park Service - South Florida / Caribbean Network*

· Designing computer vision system to classify and count colonial nesting birds in Biscayne National Park

**Undergraduate Teaching Assistant**  August 2020 - Present
*Brown University Computer Science Department*

· Fall 2020: Intro to Computer Systems (CS 33)
· Guides students at weekly code and conceptual hours, responds to student questions on course forum page, and revises assignments and solution code

**Math and Physics Tutor**  October 2019 - Present
*Brown University Sheridan Center*

· Prepares and delivers weekly lessons for multiple groups of five students
· Courses tutored: Multivariable Calculus (Fall 2019), Introductory Mechanics (Spring 2020), and Probability and Statistics (Summer 2020 and Fall 2020)

## SKILLS & SELECTED COURSEWORK

· Python (NumPy, Pandas, TensorFlow) · C · Java · OCaml · HTML/CSS · JavaScript · GCP · French
· **Fall 2020:** Algorithms · Programming Languages · Complex Analysis · Quantum Chemistry
· **2019-2020** Machine Learning · Computer Vision · Abstract Algebra · Computer Systems (C and x86 Assembly) · Statistics I · ODEs · Circuits · E & M
· **2018-2019:** Intro to Programming, Algorithms, and Data Structures · Honors Linear Algebra · Multivariable Calculus with Analysis · Analytical Mechanics

## ENGAGEMENT & AWARDS

· **Brown University Band**
*Vice President*  Nov. 2019 - Nov. 2020
· Sets performance schedule and prepares marching forms for field and ice shows
· Primary contact between Brown Athletics and the Band
· **National Merit Scholar**  May 2018
· **MA Speech & Debate State Champion**
*Student Congress*  April 2017