

Charlie Gagnon

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EDUCATION

Brown University

Sc.B. – Computer Science

September 2018 - May 2022

Providence, RI

Natick High School

September 2014 - June 2018

Natick, MA

PROJECTS

lemonADE20K

July 2020 (Ongoing)

- Wrote Python package that manipulates the MIT ADE20K scene segmentation dataset with Python code, instead of the dataset's native MATLAB

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

Undergraduate Teaching Assistant

Computer Science Department

August 2020 - Present

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

Brown University Sheridan Center

Math and Physics Tutor

October 2019 - Present

- Prepares and delivers weekly lessons for two or three groups of five students
- Has tutored Multivariable Calculus (Fall 2019), Introductory Mechanics (Spring 2020), and Probability and Statistics (Summer 2020 and Fall 2020)

SKILLS & SELECTED COURSEWORK

ENGAGEMENT & AWARDS

- Python (NumPy, Pandas, TensorFlow) · C · Java · OCaml · HTML · CSS · JavaScript · GCP
- Proficiency in French
- **Fall 2020:** Algorithms · Programming Languages · Complex Analysis · Quantum Chemistry
- **Spring 2020:** Machine Learning · Computer Vision · Abstract Algebra · Electrical Circuits and Signals · Ordinary Differential Equations
- **Fall 2019:** Intro to Computer Systems (C and x86 Assembly) · Statistics I · Electricity and Magnetism
- **2018-2019:** Intro to Programming, Algorithms, and Data Structures · Honors Linear Algebra · Multivariable Calculus with Analysis

· **Brown University Band**

Vice President

Nov. 2019 - Nov. 2020

- Primary contact between Brown Athletics and the Band
- Sets performance schedule and prepares marching forms for [field](#) and [ice shows](#)

· **National Merit Scholar**

May 2018

· **MA Speech & Debate Champion**

Student Congress

April 2017