

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

Brown University 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

Math and Physics Tutor

Brown University Sheridan Center

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