Charlie Gagnon

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EDUCATION

Brown University — September 2018 - May 2022
Sc.B. – Computer Science — *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

Brown University Computer Science Department — August 2020 - Present
Undergraduate Teaching Assistant
· 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 — October 2019 - Present
Math and Physics Tutor
· 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

· 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

ENGAGEMENT & AWARDS

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