

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

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 Python deep learning libraries

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