

# Giancarlo Sirio

gsirio@bu.edu | 201-978-0373 | gian-s.github.io

## EDUCATION

### **Boston University**

May 2022

Bachelor of Arts in Computer Science

**Selected Coursework:** Data Structures, Algorithms, Computer Systems, Statistics, Multivariable Calculus, Linear Algebra, Data Science, Probability, Linear Models, Machine Learning, Deep Learning, Computational Audio

## SKILLS

**Technical:** Python (6 years), R, C/C++, OCaml, git, LaTeX, TensorFlow, Pytorch, NumPy, GCP, Docker, GNU/Linux, Kubernetes, Librosa

**Language:** Fluent in Spanish (Native), Conversational in Italian

## EXPERIENCE

### **Georgia Institute of Technology, S.U.R.E. Summer Researcher**

May 2021 - July 2021

- Collaborated with researchers to create a system to aid speech pathologists diagnose Autism Spectrum Disorder
- Implemented research papers, read documentation, trained deep learning models, and expanded code base
- Won 1<sup>st</sup> place for best power-point presentation competing against other student researchers

### **Royal Bank of Canada, QTS Summer Analyst**

June 2020 - August 2020

- Scraped and modeled trade surveillance data to help build company's new data lake infrastructure
- Competed in machine learning contest with intern group to implement a Bitcoin price prediction model

### **Boston University CAS On-Campus Internship, CS Ambassador**

September 2019 - December 2019

- Proposed, coordinated, advertised, and executed regular workshops for undergraduate computer science students
- Collaborated with computer science department professors to create events that best benefit undergraduate students

## PROJECTS

### **Deep Learning for Question Detection**

May 2021 - August 2021

- Developed classifiers to detect when a question was uttered given a noisy audio signal of a spoken conversation
- Trained Recurrent Neural Networks (LSTM, GRU), and Transformer networks on audio and text features
- Conducted experiments with different hyperparameters, feature representations, and modeled results for analysis

### **City of Revere COVID-19 Census Project**

January 2021 - April 2021

- Investigated demographic inequalities in Revere, Massachusetts using local and U.S. Census Bureau data
- Programmed static and dynamic visualizations for the city of Revere using geospatial data with Python
- Managed JupyterHub server for team of 5 developers to facilitate efficient collaboration

### **COVID-19 Lung X-Ray Classification**

November 2020 - December 2020

- Constructed multi-class classifiers of X-Ray images taken of lungs infected with COVID-19 or Pneumonia
- Utilized transfer learning with existing CNN architectures to improve accuracy (VGG-16, Inception-V3)
- Visualized final layers of networks using dimensionality reduction techniques (T-SNE)

## ACTIVITIES

### **Alpha Phi Omega Community Service Fraternity, Member**

September 2021 - May 2022

### **First Year Student Outreach Program, Staff**

August 2021

- Led a group of 14 first-year students to conduct community service throughout the Boston area
- Served as a mentor and resource for students to help equip them with civic tools of engagement

### **BU Mathematics Directed Reading Program, Member**

September 2020 - December 2020

## HONORS

### **Boston University College of Arts and Sciences**

Dean's List

Fall 2018

Richard D. Cohen Scholarship

May 2018

32BJ Training Fund Scholarship

June 2018