Giancarlo Sirio

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EDUCATION

Boston University Bachelor of Arts in Computer Science
Expected May 2022
***Selected Coursework*:** Applied Digital Signal Processing, Data Structures, Algorithms, Computer Systems, Statistics, Multivariable Calculus, Linear Algebra, Data Science, Probability, Linear Models, Machine Learning, Deep Learning

SKILLS

***Programming*:** Advanced(4+) Python, Intermediate(2+): C/C++, JavaScript, OCaml, git, bash, LaTex, TensorFlow, NumPy, GCP, Docker, GNU/Linux, Kubernetes, Librosa
***Foreign Language**:* Fluent in Spanish (Native), Conversational in Italian

EXPERIENCE

Georgia Institute of Technology, S.U.R.E. Summer Researcher May 2021 - July 2021
- Worked on a summer research project for the School of Electrical and Computer Engineering
- Implemented research papers, read documentation and trained deep learning models
- Conducted experiments to tune hyperparameters, and gathered results to display in an organized manner
- Won 1st 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
- Helped develop a question detection system to assist speech pathologists in detecting Autism Spectrum Disorder
- Used Recurrent Neural Networks such as LSTM and GRUs, and compared results with Transformer models
- Utilized different digital signal processing algorithms to extract features from audio data sets to feed into models

City of Revere COVID-19 Census Project January 2021 - April 2021
- Investigated demographic inequalities in the distribution of city services in Revere, Massachusetts
- Created static and dynamic visualizations of the city Revere using geospatial data with Python
- Managed JupyterHub server for team of 4 developers to efficiently collaborate on data analyses

COVID-19 Lung X-Ray Classification November 2020 - December 2020
- Crafted binary and multi-class classifiers of X-Ray images taken of lungs infected with COVID-19 or Pneumonia
- Used transfer learning with existing CNN architectures to improve accuracy (ResNet50, VGG-16, Inception-V3)

ACTIVITIES

Alpha Phi Omega Community Service Fraternity, Member September 2021 - May 2022
***First Year Student Outreach Program**, Staff* August 2021
- Organized and led a group of 14 first-year students to conduct community service throughout the Boston area and promote active citizenship in the community
- 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

PUBLICATIONS

Caulley, Desmond, David V Anderson, and Giancarlo Sirio, "QuestionNet: Audio-based Interrogative Utterance Detection Using an Attention-Driven Network." paper submitted to Conference of the International Speech Communication Association Interspeech 2022, Incheon, Korea, 18-22 September. 2022.