

Daniel Silver

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Education

Northeastern University

Boston, MA

B.S in Computer Engineering/ M.S in Computer Engineering: Computer Vision, Machine Learning May, 2021

Graduate GPA: 4.0, Major GPA: 3.66, Overall GPA: 3.47, Honors: Dean's List Spring 2019, Dean's List Fall 2016

Graduate Coursework: Machine Learning and Pattern Recognition, Parallel Processing for Data Analytics, Data Visualization, Big Data and Sparsity, Software Security

Undergraduate Coursework: Algorithms, Object Oriented Design, Capstone, Computer Architecture, Discrete Structures, Embedded Design, Networks, Database Design, Circuits, Differential Equations, Linear Algebra, Calculus III

Technical Skills

Skills: Deep Learning (GANs, CNNs, Triplet Embedding Networks) (**Tensorflow**), Parallel Computing (**Apache Spark**), NLP (**PyTorch**, **Scikit-learn**, **Snorkel**), Computer Vision (**Open CV**), Virtualization (**Docker**, **VmWare**), Version Control (**Git**), Linux (**Debian-based**, **CentOS**, **Raspberry Pi**), Agile Development (**Jira**, **Bitbucket**), AWS (**S3**), APIs (**Flask**)
Programming Languages: CPython, Java, SQL, C++, LaTeX, MIPS Assembly, Verilog, Bash, PowerShell

Work Experience

Lux Research

April 2019-Present

Data Science & Software Engineering Intern

- Utilize NLP algorithms along with other optimizations to score over one million companies for internal purposes
- Train and compare different NLP models (**Naive-Bayes**, **SVM**, etc.) for ranking companies based on descriptions
- Create machine learning APIs (**Flask**) and put it into production though the full stack from start to finish

Air Force Research Lab, Information Doctrine

July 2018-December 2018

Machine Learning Research Coop

- Generated artificial images and audio samples using GANs with CNNs (**Tensorflow**)
- Created texture generalizations for reinforcement learning using auto-encoders
- Transferred image style from one set of images to another using Cycle GANs
- Implemented algorithms from different research papers and document results for the Air Force Research Lab
- Preformatted audio and image data to optimize learning for deep neural networks (**Pandas**, **NumPy**, **Pickle**)
- Utilized LSTMs for sequence to sequence mapping

Action Lab, Northeastern University

September 2017-April 2018

Computer Vision/Software Research Assistant

- Optimized programs for color tracking (**Open CV**)
- Created augmented reality games for data acquisition (**Pygame**)
- Analyzed movement and stability data to assist children with muscular disorders
- Improve efficiency of object tracking by optimizing HSV masks
- Built GUIs (**PyGUI**) for accessibility and easing customizable run configurations
- Calibrated cameras to eliminate distortion in precise motion tracking

Virtual Operations

May 2017-July 2017

Intern

- Developed scripts in Bash, PowerShell, and Python to automate IT services for use on over 600 hundred computers, both Mac and Windows
- Created salted hashes using Node JS and PowerShell, ensuring security with bearer tokens for APIs
- Designed custom GUIs and reports using 3rd party REST APIs to expand reporting capabilities beyond the software's standard capabilities.