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interests

machine learning, bioinformatics, cryptography, privacy

skills

- **Data Science:** Python, R, Matlab, MySQL
- **Deep Learning:** Keras, Tensorflow, PyTorch
- **Systems:** C, C++, ARM
- **Web:** Javascript, HTML & CSS, flask

education

2017 - 2021 **Stanford University**
Stanford, CA

- Double major in CS and Bioengineering
- Relevant courses: Probability Theory, Design and Analysis of Algorithms, Deep Learning, Physical Biology, Organic Chemistry, Genetics

2016 - 2017 **George Washington University**
Washington, DC

- Dual Enrollment Program, courses in Machine Learning, Bioinformatics, and Cryptography

2013 - 2017 **Woodrow Wilson High School**
Washington, DC

- Weighted GPA: 4.5

projects

2018 **Generative Adversarial Networks to Build Yeast Regulatory Sequence**
info : github : Python, Keras, Tensorflow

(In progress) Training Wasserstein-GANs to build yeast regulatory sequence for a given target expression level in a target amino acid concentration. Working in the Kundaje Lab at Stanford Medical School.

2017 **Fleeing from Terror**
info : github : Matlab

Developed computational model of how crowds evacuate buildings given a blueprint. Winning project of CS 109 Fall Competition. Article published in the Stanford Journal of Public Health.

2016 - 2017 **DOGSV**
info : github : MySQL, Python, flask

Built database for the storage and analysis of hundreds of millions of structural variants. Trained model to cluster variants and assess the likelihood of variants being false positives. Working in the Ostrander Lab at the National Institutes of Health.

experience

since 2018 **Machine Learning Engineer**
Star Lab Corporation

- developing heuristic-based early detection algorithms for embedded combat systems; deep learning to filter false positives

since 2018 **Senior Advisor**
Data for Progress

- building word2vec models to compare bias across text datasets

since 2018 **Undergraduate Researcher**
Kundaje Lab, Stanford Medical School

- training Wasserstein GANs to generate regulatory sequence
- using architecture search to develop and train convolutional neural networks to predict expression from yeast MPRA data at various amino acid concentrations

2017 **Technical Specialist**
Star Lab Corporation

- automated the exploration of the strategy space of defensive and offensive cybersecurity, working on a small research team to:
 - develop a game theory computation library
 - build a system to dynamically load and execute abstract Python modules on remote machines, with and without authorization credentials
- developed project proposal for a system to detect shifts in training distributions in online learning algorithms to detect attacks using malicious training data

2015 - 2017 **Research Fellow**
Ostrander Lab, National Institutes of Health

- developed Database of Genomic Structural Variation (DOGSV)
- developed specialized random forest algorithm to identify candidate causal areas from single nucleotide permutation (SNP) data
- developed script to identify inheritance model in SNP-SNP interaction
- designed parallelized algorithm to identify quality of SNP tagging in a region