

Nikhil Sardana

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github.com/nikhilsardana
nikhilsardana.github.io

- Education** **Thomas Jefferson High School for Science and Technology**
Computer Systems Research, 2014 - 2018
GPA: 4.44 (Weighted)
Post-AP Courses: Parallel Computing (C, MPI), Artificial Intelligence (Python),
Multivar Calculus, Math Techniques, Computer Vision (C++)
AP Exams: Physics C: M and EM, Computer Science A+, Biology, Chemistry,
BC Calculus, Statistics, U.S. History, Latin (All 5)
SAT: 1590, Essay: 8/8/8
SAT II: Chemistry, Math II: 800
- Experience** **Communications Engineering Branch, National Institutes of Health**
Engineering Intern, June 2017 - August 2017
Project: Deep Learning Classification of Alzheimer's from fMRI Data
Used convolutional networks to diagnose Alzheimer's and stages of cognitive impairment more accurately than previous algorithms. Diagnostic algorithms are cheaper, faster, and less invasive than current methods.
- Projects** **Automating Identification of Terrorist Recruitment on Social Media**
Worked with friend to create algorithm to identify terrorist propaganda accounts. Used convolutional networks for flag and logo identification and SVMs for account classification. Presented research at Raytheon and NSA.
Awards: Intel International Science and Engineering Fair Finalist, 2017
Siemens Competition Semifinalist, 2016
- Team SegFault, MIT Battlecode**
Worked in team of 4 in this month-long competition that combines battle strategy, software engineering, and AI. Wrote pathfinding, dodging, and communications algorithms in Java.
Awards: 5th Place | High School Division, 2017
- CrimeFighter**
App for identifying and reporting crimes in real-time for faster response
Worked in team of 4 to develop app during HackTJ 2017.
Awards: Grand Prize - HackTJ | BigParser Competition (\$650)
- TitrationGL - WebGL Titration Simulator**
After seeing the outdated online titration lab in AP Chemistry, I decided to build a modernized, interactive, 3D WebGL-based titration simulator.

Leadership	TJHSST Machine Learning Club Co-Founder and Captain, 2016 - 2018 Created lectures and presentations to teach other students the theory behind ML. Developed weekly Kaggle InClass competitions to apply material to real-world datasets. Mentored student ML research. Procured sponsorship from Intel, Yext, and TJ Partnership Fund for computational resources.
	TJHSST Chemistry Team Webmaster, 2016 - 2018 Pioneered use of ChemDoodle 3D models to create interactive learning. Lectured on Computational Chemistry.
Awards	USA Biology Olympiad Semifinalist, 2015 Top 500 in United States
	National Latin Exam Gold Medalist, 2014 - 2016 NJCL Etymology Exam Gold Medalist, 2017 AIME Qualifier, 2015 TJHSST Track and Cross Country, 2016 - Present
Skills	Programming/Scripting Languages Proficient in Python, Java, HTML, CSS Experienced in Javascript, C, C++
	APIs and Frameworks Experience with OpenMP, OpenGL, WebGL, NodeJS
	Machine Learning Libraries Experience with PyTorch, Keras, and Tensorflow
	Operating Systems Experience with Windows, Mac OS, Ubuntu, CentOS, and Gentoo Linux
	Other Software Experience with Android Studio, Git, Blender, Microsoft Office, L ^A T _E X
Websites	nikhilsardana.github.io tjmachinelearning.com activities.tjhsst.edu/chemteam