

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), 3.92 (Unweighted)

Post-AP Courses: Parallel Computing (C, MPI), Artificial Intelligence (Python)

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

An algorithm to diagnose Alzheimer's is cheaper, faster, and less invasive than current methods. Final results pending.

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After seeing the outdated online titration lab in AP Chemistry, I decided to build a modernized, interactive, 3D WebGL-based titration simulator.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 competitions to apply material to real-world datasets.

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 and 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, \LaTeX

Websites

nikhilsardana.github.io

tjmachinelearning.com

activities.tjhsst.edu/chemteam