RUSHI SHAH

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EDUCATION

THOMAS JEFFERSON HIGH SCHOOL FOR SCIENCE AND TECHNOLOGY (STUDENT)

Graduating Class of 2016

Thomas Jefferson (TJ) is a highly selective, gold medal high school nationally renowned for its rigorous academic curriculum focused on Science, Technology, Engineering, and Math (STEM). The school boasts 13 specialized research labs, ranging from astrophysics to microelectronics to oceanography. It is the number one high school in the State of Virginia and is consistently ranked as one of the Top 5 High Schools in the United States by US News and World Report.

EXPERIENCE

HACK THE NORTH (WINNER)

36 hour long collegiate hackathon at University of Waterloo in Toronto, Canada. We created SpaceBowl, a virtual reality bowling game. Utilized the Oculus Rift Development Kit 2, Unity 3D, and the Myo gesture controlled armband to model an accurate real-life virtual bowling experience. Placed in top 10 (there was no differentiation among top ten i.e. first place, second place, or third place) along with winning the BackTrack API prize.

YALE HACK (YHACK)

36 hour long collegiate hackathon at Yale University where we made Pynt, a program which lets users draw out shapes and snippets of code to create Python scripts. Drawings on the tablet site symbolize object oriented programs that are sent via web-sockets in real-time to the desktop site where they can be edited and run on the online interpreter. More info at https://github.com/Pynt/Pynt

PILOT DC

24 hour long hackathon based in DC to promote high school computer science awareness and education. We created the 3Draw application (more info at https://github.com/mjkaufer/3draw) which modeled mobile gyroscopic movement in a 3D environment on a PC utilizing web sockets, Meteor.js, Bootstrap.js, Three.js and a variety of other HTML5/JavaScript frameworks.

MITRE CORPORATION (SUMMER INTERN)

A paid computer science internship at the MITRE Corporation operating in the department that reports to the Federal Aviation Administration. I used Python to create the entire natural language processing system for parsing data sets from over 12,000 air traffic controller transmissions and created metrics/statistics for use by subject matter experts to report progress to the FAA clients.

TJ DEVELOPMENT CLUB: OUTREACH COORDINATOR/TREASURER

Thomas Jefferson's Development Club fosters interest in software development by hosting weekly computer programming lessons, challenges, and solutions. The entirely student run club helps educate high school students with any range of experience in the vast field of software-development with lessons in topics like frameworks, HTML5 game development, and Web APIs.

REPRESENTATIVE COURSES

FOUNDATIONS OF COMPUTER SCIENCE

9TH GRADE

Java computer science course that introduces object-oriented programming, graphics and animation, GUI interfaces, arrays and files, sorting, recursion, data representation, boolean logic, and ethics. The course was lab-based with an emphasis on cooperative learning and developing problem-solving skills.

ADVANCED PLACEMENT (AP) COMPUTER SCIENCE A PLUS DATA STRUCTURES

10TH GRADE

This course is a standard second-semester college course on algorithms and data structures in an object-oriented environment taught in Java. The sorting algorithms include selection, insertion, merge, quick, and heap; the data structures include arrays, linked lists, stacks, queues, trees, sets, maps, and graphs. Additional topics include the Java Collections framework, Big-O analysis, recursion, and class design.

ARTIFICIAL INTELLIGENCE 1 AND 2

11TH GRADE

A post advanced placement level computer science course taught in Python covering topics ranging from knowledge representation, production systems, matching, searching techniques, logical reasoning, predicate calculus, and genetic algorithms.