RISHAV BHAGAT

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I am a junior in high school seeking an internship position where I can utilize and enrich my computer science knowledge and work with new cutting-edge technology.

EDUCATION

SOUTH BRUNSWICK HIGH SCHOOL
GRADUATE YEAR: 2020
GPA: 4.34 (Weighted), 3.93 (Unweighted)
AWARDS: AP Scholar with Honor; National AP Scholar (Pursuing)
ACHIEVEMENTS:
Scored 5 on all four AP Exams taken in prior years.
Scheduled for another four AP test in May 2019.
Scored 800 (Maximum Score) on both Mathematics Level II and Physics Subject SATs
ADVANCE COURSES TAKEN:
Mobile Application Development, AP Computer Science, Multivariable Calculus and Linear Algebra & AP Physics C.

TECHNICAL SKILLS

LANGUAGES: Java Script, Node JS, Python, Java, C++, C#, Dart, Swift, HTML, CSS, XML, Ruby, PHP
FRAMEWORKS: React, React Native, Angular, Flutter
OPERATING SYSTEMS: Windows, Mac OS, Linux, Android, iOS
NETWORKING PROTOCOLS: TCP/IP, HTTP
DATABASE: Firebase Realtime Database & Cloud Firestore, SQL Lite
TOOLS: Android Studio, Eclipse, Visual Studio, Visual Studio Code, Unity, Vi, Atom, PyCharm

PROJECTS

NEURAL NETWORK LIBRARY
https://github.com/rishavb123/NeuralNetwork | https://neuralnetwork.bhagat.io
This is a neural network library that I created from scratch using the linear algebra and calculus portions of the math library that I made. I implemented this library to make an Android app that would connect to a Java TCP server that ran the neural network. On the client side, the user is able to draw a number, and the app will continuously send the image to the server for it to guess a number. I have also made documentation for this library using Javadoc commenting.

HOME SERVER
https://github.com/rishavb123/HomeServer | https://github.com/rishavb123/SmartRoom
I created a NodeJS express http server. It can upload and download files using a basic webpage as the frontend. The server is also connected to smart home devices on the network. Using different APIs for each device, I made the household devices such as smart thermostat an lights switch, voice controlled.

SECURITY CAMERA

https://github.com/rishavb123/Security_Camera

This is a security camera that I created using the OpenCV library in python. It detects motion and recognizes faces. When any motion is detected an email will be sent to me with information about the motion and a video of the motion. The security camera can also be controlled through a google form. I used the Google Sheets API for this after connecting the responses from the google form to a sheet.

SERVER DATA

https://github.com/rishavb123/ServerData | https://data.bhagat.io

This is a web application that uses the React framework to display some JSON data on servers. It has many features to modify, share, and export the data all on the web application. For further data analysis, I created a python server that uses a machine learning algorithm called K-Nearest Neighbors and other analysis methods to predict and analyze the data. This application uses firebase to store data under user account.

LEADERSHIP & ACTIVITIES

SEPTEMBER 2016 – CURRENT

COMPUTER SCIENCE CLUB (OFFICER)

I teach students how to code in HTML, CSS, and JavaScript. I personally run the backend for the club. I am currently managing and improving the club portal, the club's registration, and working on an app for officers. In addition, I also teach the advanced section of the club.

APRIL 2016 – CURRENT

HACKSB - HACKATHON (ORGANIZER)

I conducted hackathon along with a team of five other Computer Science Club officers at the South Brunswick Pubic Library to encourage students to pursue computer science and create projects. In addition, my role also consists of running the backend for the hackathon, including the registration, auto-emailing, and more.

2009 – CURRENT

MARTIAL ARTS (LEADERSHIP TEAM)

I am a second-degree black belt at Master Peter's Academy of Martial Arts. As a part of the leadership team, I instruct and help students to learn their curriculum way. I also build leadership qualities and character within myself and other students.

2017 – CURRENT

MARCHING BAND (MEMBER)

I play the baritone in the South Brunswick Viking Marching Band. Last year, our band won the state championship award. In the band, we work together as a team to put on great show that is fully coordinated.