

# Brianna Ta

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## Education

**University of North Carolina at Chapel Hill**, Chapel Hill, NC

May 2024

*Bachelor of Science, Computer Science, GPA 4.00/4.00 (Dean's List)*

**Thomas Jefferson High School for Science and Technology**, Alexandria, VA

June 2021

*High School Diploma, GPA 4.44/4.00*

## Work Experience

**Cisco Systems**, *Technical Sales Engineering Intern*

May 2022 – Present

- Created the framework for facilities management and asset tracking in the US Air Force and Navy
- Developed Node-RED Webex and email notifications for smart facilities management of 8 data centers
- Integrated Node-RED and ATAK client for Federal IoT to track important assets
- Improved UI dashboard for monitoring LoRaWAN sensor data
- Helped run the Cisco High 2022 Program with over 140 externs at 9 sites nation-wide

**TTeK**, *Software Engineering Intern*

December 2021 – March 2022

- Developed admin website in React and integrated with Google Firebase database

**Kenari Adaptive Learning**, *Software Engineering Intern*

March – July 2021

- Performed QA, fixed bugs, and enhanced UI design with Angular components
- Integrated frontend with backend and Google Firebase database

**re:Bloom**, *Web Developer*

January - April 2021

- Developed several websites and special features for clients through WebFlow and WordPress
- Implemented FlexBot, SEO, and ADA regulations

**Sirch**, *Backend Developer*

January – March 2021

- Acted as team lead to manage meetings and allocate tasks
- Created a Twilio API proxy service and with Node.js; integrated with a MongoDB database, Bootstrap front end widget, and IOS app

**Cisco Systems**, *Project Development Extern*

June 2020

- Researched market technologies that would prevent the spread of COVID-19 and reduce the risk of in-person school
- Put together a presentation marketing my team's solution

## Relevant Coursework

**Machine Learning** (Fall 2020 – Spring 2021): Machine learning using Jupyter notebooks, involving the application of categorization algorithms on the MNIST handwritten digits dataset (k-means clustering, OVR SVMs, logistic regression, decision tree analysis, CNNs)

**Web App Development** (Fall 2020): Web app development using JavaScript, HTML, CSS, and Handlebars, including web server configuration using Node.js, interacting with the DOM, using OAuth authentication, making use of middleware and cookies

**Computer Vision** (Fall 2019 – Spring 2020): An introduction to the field of Computer Vision in C++, beginning with computational geometry and convex hulls before moving into Canny edge detection and rendering 3D geometric shapes

**Artificial Intelligence** (Fall 2019 – Spring 2020): Artificial Intelligence with Python, covering game theory, graph traversal using A\*, and minimax with alpha-beta pruning. Also covers decision trees, perceptrons, and neural networks using multivariate calculus, linear algebra, and machine learning libraries

## Projects

**OTIS** (2<sup>nd</sup> Place, Cisco Webex Hackathon, January 2021): MERN stack web application for tracking building occupancy using Computer Vision and Machine Learning; deployed on Heroku using AWS

**Taxi Traffic** (1<sup>st</sup> in CabIQ category, HackTJ 7.5, December 2020): Web interface displaying our data analysis and prediction algorithm for taxi demand hot spots in DC

**Mitigavite** (Top 13, Bloom 2020 Startup Competition, July 2020): Evaluates vitals and symptoms using biosensors and user input, calculates probability of having COVID-19, checks if the user is wearing a mask properly

**Guns Begone** (HackTJ 6.0, April 2019): Python application that determines whether the firearm is within a certain proximity of a school or other public area, alerts security through email or push notifications along with information about the intruder

**Care4Me** (HackTJ 5.0, March 2018): Java application that asks questions specifically targeting areas of the brain affected by Alzheimer's and determines what kind of risk the user has for the disease

## Skills

**Software:** Git, VS Code, Google Colab, Jupyter Notebooks, Microsoft Office/Google Suite

**Programming Languages:** Python, Java, HTML, CSS, JavaScript, C++, C

**Technologies:** OpenCV, Python ML (Pandas, NumPy, TensorFlow, Keras, Matplotlib), Node-RED, Node.js, Angular.js, React.js, Express.js, Handlebars, Node-RED, ATAK, MongoDB, Google Firebase, MySQL, AWS, LoRaWAN

## Clubs

**HackNC**, **Director of Development** (Spring 2022 – Present): Led 30 members on the dev committee, restructured the website, organized several beginner-friendly workshops, programmed text notifications for events, team matching algorithm, and Devpost web scraping algorithm for judging

**CS + Social Good**, **Tech Lead** (Spring 2022 – Present): Led a team of web developers to create an analytical dashboard website for Environmental Educators of North Carolina (EENC), helped a local nonprofit (PORCH) create a website to log and track food donations

**Girls Who Code**, **Outreach Committee** (Spring 2022 – Present): Social media content creation, marketing for the club, reaching out to schools