

# David Cheng

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## EDUCATION

### DUKE UNIVERSITY

EXPECTED MAY 2021 | GPA: 3.8 | PRATT ENGINEERING DEAN'S LIST | DURHAM, NC

- Candidate for Computer Science (BS)
- Relevant Coursework: **CS330** Design and Analysis of Algorithms | **CS308** Software Design and Implementation | **CS250** Computer Architecture | **CS230** Discrete Math for CS | **CS201** Data Structures and Algorithms | **ECE280** Signals and Systems | **ARTSVIS198** Experimental Interface Design
- Vice President of Institute of Electrical and Electronics Engineers (IEEE)

## EXPERIENCE

### OPTUM: SOFTWARE ENGINEER INTERN

TECHNOLOGY DEVELOPMENT PROGRAM | RALEIGH, NC | JUN-AUG 19

- Created a chatbot mobile application, integrated with personal health records. Pitched business value to high level executives and physicians on a biweekly basis.
- As Development Lead and Product Experience Designer, coordinated a team in an AGILE work environment to ship features in bi-weekly sprints, and developed front end components in React Native + Redux, a backend Flask application, and Docker and Openshift deployment pipelines.

### DUKE: DATA ANALYST INTERN

ANALYTICAL EXPLORATION FOR DUKE DEVELOPMENT | DATA+ | JUN-AUG 18

- Analyzed large data set of over 70,000 text records, created a machine learning model to identify high prospective donators, and triaged donators by interests with topic modeling and named entity recognition.
- Created a tool to model and predict future data leading to an increase in efficiency and effectiveness of fundraising. Employed Python libraries such as pandas, NLTK, Scikit, Tensorflow.

## PROJECTS

### DASH DASHBOARDS (FULL STACK WEB DEV)

- Extracts student survey responses from API into mySQL server, and visualizes data in three separate web applications, focused on in class interaction, data analytics, and machine learning, respectively.
- Self hosted using Docker and Apache, and used by professor and around 300 students to analyze results, live in-class and out-of-class, enhancing education experience. Use of Dash, scikit, NLTK, mySQL. Deployment and development environments by shell scripts and automated processes.

### FACT CHECKING (CHROME EXT)

- As a part of the Automated Fact Checking project at Duke, created a Google Chrome extension that modifies YouTube pages to display fact checks produced from a pipeline, which is synced with video playback.
- Built with Javascript, REST API, HTML/CSS Injection.

### FORESITE (IOS APP)

- Rapid reporting and alert system driven by user reports of natural disasters. Sends notifications in certain radius of user reports, and maps reports in visualizations (in-app and on web), for victims and aid to coordinate efforts.
- Focused around live collection of data and rapid response with use of Firebase's live servers (geofire). Built with Swift, React, Google Cloud.

## SKILLS

Java  
Python  
Javascript  
React/React Native/  
Redux  
  
HTML  
CSS/SASS  
Git  
REST API  
Swift (iOS Dev.)  
Android Dev.  
SQL Server  
Text Mining  
C++  
LATEX  
MATLAB  
Illustrator  
Premiere