# David Cheng

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## EDUCATION

### DUKE UNIVERSITY | PRATT SCHOOL OF ENGINEERING
EXPECTED MAY 2021 | GPA: 3.750 | PRATT ENGINEERING DEAN'S LIST

- Electrical and Computer Engineering (BSE) and Computer Science (BS) Majors
- Relevant Coursework: **CS201** Data Structures and Algorithms | **CS308** Software Design and Implementation
  **ECE110** Fundamentals of Electrical and Computer Engineering | **ECE280** Signals and Systems
  **ARTSVIS198** Experimental Interface Design

## EXPERIENCE

### DATA ANALYST | DATA+: ANALYTICAL EXPLORATION FOR DUKE DEVELOPMENT
DATA SCIENCE | 10 WEEK RESEARCH PROGRAM | DUKE INFORMATION INITIATIVE | 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 for Duke Development 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.

### RESEARCH ASSISTANT | FUQUA BUSINESS SCHOOL
WEB SCRAPING | SQL | UNDER DR JONATHAN CUMMINGS | JUL18-CURRENT | HTTPS://BIT.LY/2QIGX6M

- Created crawler to extract public data on Google Scholar and other sources using rotating proxies, user agents, cookies, BeautifulSoup in Python, and created mySQL server and REST API to create custom queries for researchers to use.

### WEB DEVELOPER | CANVAS DATA VISUALIZATION DASHBOARD
DASH | MYSQL | FULL STACK | UNDER DR JONATHAN CUMMINGS | AUG18-CURRENT | HTTPS://BIT.LY/2OA9D6I

- Pulls student responses to assignments from Canvas API, populates mySQL server, and visualizes data in web application. Live backend with automatic and manual update options. Deployed online and used by professor and around 300 students to analyze results, enhancing education experience. Use of Dash (Python framework), plot.ly (React), mySQL.

## PROJECTS

### FORESITE (IOS APP) | NATURAL DISASTER CROWD SOURCING APP
SWIFT | REACT | FIREBASE | PENNAPPS 2018 | HTTPS://BIT.LY/2XIT4U6

- 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.

### INTEGRATED LANGUAGE (CHROME EXT) | LANGUAGE LEARNING TOOL
CHROME EXTENSION | JAVASCRIPT | HACKDUKE 2017 | HTTP://BIT.LY/2Z6SSPY

- Google Chrome extension that injects HTML to create interactive language learning modules.
- Built with Javascript, Natural Language Processing libraries, Google Translate API, Quizlet API.

### STREAMLINES (WEBSITE) | TEXT EDITOR FOR CREATIVITY
REACT FRAMEWORK | PERSONAL PROJECT | HTTPS://BIT.LY/2KZMJUM

- Text editor with elegant design aimed at changing writing behaviors.
- Built with React, SASS, Firebase API, Javascript.

## SKILLS

Python
Java
Android Development
Swift (iOS Development)
Javascript
React
HTML
CSS/SASS
Git
REST API
SQL Server
Text Mining
C++
LATEX
MATLAB
Illustrator
Premiere
Fluent in Mandarin