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 | **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 Full Stack Developer, 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