# Hoa Nguyen

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## **Education**

*University of California, Santa Cruz* Computer Science, Bachelor's degree Linguistics, Bachelor's degree September 2016 - June 2020

**GPA: 3.4** 

### Experience

#### January 2020 - June 2020

# Software Engineer (Senior Design Project) - University of California, Santa Cruz

- Partnered with a small company to build a hands-free conversational chatbot app for people living with diabetes helping them manage and learn more about their diabetes
- Built two critical text-to-speech and speech-to-text components using React Native and a variety of APIs opening the app to those with visual impairments as well.
- Collaborated in a team of six practicing Agile software development with Scrum framework

## October 2018 - August 2019

# Linguistics Research Assistant - University of California, Santa Cruz

- Collaborated on a JavaScript based computational web application that draws syntactic and prosodic trees and compared them against Optimality Theory constraints combining both linguistics and computer science
- Created JavaScript algorithms for the web application including code that iterated through sentence trees using recursion and trees further extending use case coverage as well as contributed to many other constraints functionality
- Developed a searchable bibliography according to constraints using JavaScript, HTML, and CSS
- Used PRAAT software to annotate sentences in Basque for tones

#### June 2017 - September 2018

## Host - Merit Vegan Restaurant

- Obtained skills in multitasking and prioritization, attention to detail, proactiveness
- Developed a high tolerance for stress and working in a fast paced ever changing environment.

## **Projects**

## <u>Information Retrieval-based Question Answering Engine</u> (NLP)

- Built the question processing and answer extraction features of a QA engine using Python, NLTK, regex, wordnet
- Applied concepts such as bag of words, coreference, named entity recognition, constituency trees, dependency trees Crowdsourced Anonymity
- Worked with teammates to create an app that anonymizes your personal data through sharing and using each other app user's data
- Created the TCP server and website filter as well as contributed to the code for groupings using Python, Socket, and CSV
- Practiced Agile software development with Scrum framework with one week sprints

# <u>Arbitrary Precision Calculator</u>

- Created a calculator in Java and C that supports arbitrary precision integers and rationals using abstract data types and without using Java Class BigInteger; used stacks and linked lists

#### Pmake

- recreated a Perl script that mimicked the functionalities of make(1)

## **Relevant Coursework**

Algorithms and Abstract Data Type (Java, C), Intro to Data Structures (Java, C), Artificial Intelligence (Python), Intro to Natural Language Processing (Python), Data Wrangling and Web Scraping (Python), Intro to Software Engineering (Python), Fundamentals of Compiler Design (C, C++), Introduction to Algorithm Analysis, Comparative Programming Languages, Software Design Project

#### Skills

Languages: Java - Python - JavaScript - React Native - HTML - CSS - C

Concepts: Git - Algorithms - Data Structures - Linux - Object-Oriented Programming (OOP) - Scrum - Agile - Web scraping - APIs

Other: Customer Service - Research - Data analysis