# Zachary Plante

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# Education

University of California, Santa Cruz • 2015-2019 • B.S. Computer Science • Baskin School of Engineering • GPA: 3.2

# Coursework

Natural Language Processing SQL and Databases Computational Models Software Design Project I Software Design Project II Discrete Mathematics Computer Architecture Operating Systems Analysis of Algorithms Comparative Programming

### Skills

#### Languages

Python • Java • C • JavaScript • HTML • CSS • Processing • SQL • Latex

#### **Frameworks**

Django • React • React Native

#### **Tools**

XCode • Android Studios • NLTK • Firebase • Git • Google Cloud Platform • Micro-Controllers • Terminal

#### **Operating Systems**

Linux • Mac • Windows • FreeBSD

# References

#### **Emily Slatter**

Manager 831-713-9147

#### Juliana Zatz-Watkinz

Supervisor 530-219-1390 jzatzwat@ucsc.edu

#### **Professor Dena Robertson**

Mentor 831-459-609 demrober@ucsc.edu

# Projects

#### Meme Feed | Social Media App

Winter 2019 - Present

- Developer on React Native powered App for iOS and Andriod
- Allows users to upload photos and GIFS, as well as comment, message and follow each other
- Oversaw back-end using Firebase and Firebase Storage
- Currently launched on iOS App Store and Google Play Store

# Natural Language Processing Final Project | Question Answering Machine

Winter 2019

- Utilized NLTK to develop a QA Machine
- Able to answer both factoid and discourse questions
- Utilization of dependency and constituency parse trees
- Developed a discourse model to resolve pronouns and ambiguity

### DataViz | Web Application

Fall 2018

- Built a web application utilizing Django
- Generates graphs and songs to correlate with user input data or CSV files
- Used D3 and Tone.js to play the graph back to the user

# **Twitter Bot** | **CFG and Markov Chain based text Generators** Summer 2018

- Briefly had two Twitter profiles that tweeted the results of two Text generators
- Wrote a Context Free Grammar for one of the accounts
- Used a Markov Tree model and parsed a library of texts to generate the tree

### Modified FreeBSD | Open Source OS Work

Fall 2018

- Made several edits to the FreeBSD source code and rebuilt the kernel
- Modifications included the scheduler, the pageout algorithm, and the file system

# Mario Bot | Custom Nintendo Controller

Spring 2019

- Programmed a Teensy Micro-Controller to output serial information trough USB to communicate and control a Nintendo Switch
- The Micro-Controller can receive input from a Python script to play different games

# Related Work Experience

# Modified Supplemental Instruction Tutor | Learning Support Services at UCSC

Winter 2018 - Spring 2018

- Tutored students for introductory computer science classes
- Created collaborative programming exercises to teach students
- Attended weakly training meetings to learn communication and teaching skills