

# Ally Zhang

3633 Dripping Springs Dr.  
Plano, TX 75025

az346@cornell.edu // (469) 412-3919  
linkedin.com/in/allyzhang1311

207 Williams St. #2  
Ithaca, NY 14850

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## SKILLS

- *Programming languages*: Java, JavaScript, Python, HTML, CSS, C, SQL
- *Technologies*: Web development, machine learning, graphic design, databases, Unix
- *Other*: French (B2), Adobe Photoshop, Agile methodology

## EDUCATION

**Cornell University**, College of Arts & Sciences, Ithaca, NY

*Expected Dec. 2020*

- Bachelor of Arts, Computer Science and Linguistics
- *GPA*: 4.081/4.3
- *Notable Coursework*: Object-Oriented Data Structures; Computer System Organization and Programming; Functional Programming; Introduction to Database Systems; Computational Linguistics
- *Awards*: Dean's List, Tanner Dean's Scholar, Ted Morris Prize

## EMPLOYMENT

**Software Engineering Intern**, *Fidelity Investments*

*May 2019-Aug. 2019*

- Develop web application for creating automated mailing lists in Angular, strengthening customer outreach
- Streamline and automate internal news posts using Salesforce Marketing Cloud
- Help migrate applications to cloud hosting through Amazon Web Services
- Work in collaborative Agile environment to manage tasks and workflow

**Teaching Assistant**, Computer System Organization and Programming, *Cornell University*

*Jan. 2019-Present*

- Tutor and evaluate upper-level undergraduates on assembly programming, computer architecture, and C
- Build and maintain Python grading tool and complex C projects
- Guide students as a leader and mentor through interactive office hours, lab section, and homework assignments

## RESEARCH

**Natural Language Processing Group**, *Cornell Tech*

*Jan. 2019-Present*

- Worked with Dr. Yoav Artzi to evaluate machine-learning models on ability to process captions and image content
- Deploy and study machine-learning algorithms including recurrent and convolutional neural networks
- Coauthor of conference paper at ACL 2019: "A Corpus for Reasoning About Natural Language Grounded in Photographs"

**Computational Linguistics Lab**, *Cornell University*

*Aug. 2018-Present*

- Worked with Dr. Mats Rooth to perform computational transcription and analysis of Portuguese phonology, benefiting digital archival of Portuguese
- Parse and manipulate XML corpus data in Python, automating the process of transforming data for analysis
- Develop complex finite-state model to move transcribed text between formats

**Autonomous Vehicle Lab**, *University of Texas at Dallas*

*May 2018-Aug. 2018*

- Developed machine learning models in TensorFlow to describe vehicle behavior when changing lanes
- Analyzed video data to quantify human drivers' behavior on the road by level of aggression
- Presented code and findings to sponsors at Texas Instruments

## PROJECTS

**Database System Development**

*Sep. 2019-Dec. 2019*

- Created database management system in Java, including complex SQL interpreter
- Boosted data retrieval efficiency through query optimization and understanding of data structures

**Classification of Spanish and English Phonetic Forms**

*May 2018*

- Classified sound strings into English or Spanish using SVM machine-learning algorithm in scikit-learn
- Created Python syllabification and syllable-structure models for English and Spanish

## COMMUNITY INVOLVEMENT

**Publicity Officer**, Association of Computer Science Undergraduates, *Cornell University*

*May 2018-Present*

- Arrange events, meetings and outreach through website and social media, reaching thousands of CS students
- Active leader and volunteer in Cornell's CS community through tech talks, interview prep, and other career tools

**Technology Lead**, Colleges Against Cancer, *Cornell University*

*May 2018-Present*

- Organize graphic design, publicity and web design reaching entire Cornell campus
- Raise thousands of dollars in fundraising to benefit cancer survivors, treatment, and the annual Relay for Life