

# Ming Zhang

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## EXPERIENCE

### Explorer Intern May–Aug 2017

#### at **Microsoft**

Initiated prototyping cyber attack visualization tool project to facilitate and accelerate investigation and defense in Microsoft's Cyber Defense Operations Center using holographic 3D graphics on Microsoft **HoloLens**; designed 3D graphics on **Unity** platform with **C#** scripting; analyzed and optimized frame rendering and calculating to accommodate HoloLens's processing capability

### Fellow Oct 2016–Present

#### at **Moelis Access Science Program**

Propose curriculum in computer science for K-12 schools in West Philadelphia; volunteer to teach Scratch programming to 20 students in classroom on a weekly basis; present feedback during weekly meetings

### Research Assistant Jun–Sep 2016

#### for **Low Resource Languages for Emergent Incidents**

Worked in the lab of Prof. Mitchell Marcus for the Exploiting Quantitative Universals for Unsupervised Acquisition of Language Structure (EQUUALS) Project as part of DARPA's Low Resource Languages for Emergent Incidents Program. Assisted in building a learner for language classification in **Python**; prepared corpus data for over 80 languages from Wikipedia XML dumps; evaluated grammar rules on the corpus

### Co-President Sep 2016–Present

#### of **PLing: Penn Undergrad Linguistics Society**

Re-establish weekly event "Linguistically Speaking"; promote events on social media; manage Facebook group with over 90 members; increase participation of general body; communicate with Penn Linguistics Department for funding and faculty speakers

### Web Developer & Video Editor Sep 2015–Present

#### at **The Daily Pennsylvanian**

Build webpages for featured news stories and web templates for regular stories; maintain and improve the webpages based on statistics of usage; collect interview and b-roll footage on a weekly basis; create and manipulate graphics, film pieces, music, and special effects in a logical and attractive manner using Final Cut Pro

### Tutor Jan 2016–Present

#### for **CIS-160: Mathematical Foundations of Computer Science** and **CIS-120: Programming Languages and Techniques I**

Course materials include data types and data representation, test-driven development, programming patterns, functional programming, and object-oriented programming. Programming languages include **OCaml** and **Java**

## EDUCATION

### University of Pennsylvania May 2019

Cumulative GPA **3.88** / 4

#### Dual Degree Program

B.S.E. in **Computer Science**, School of Engineering & Applied Science

B.A. in **Linguistics**, College of Arts and Sciences

## FEATURED COURSEWORK

### Computer Science Related

Programming Languages and Techniques II: Data Structures in Java  
Introduction to Algorithms  
Introduction to Computer Architecture  
Computer Organization and Design  
Automata, Computability, and Complexity  
Introduction to Artificial Intelligence  
Discrete Probability, Stochastic Processes, and Statistical Inference

### Linguistics Related

Introduction to Linguistics  
Sound Structure of Language  
Introduction to Syntax  
Introduction to Sociolinguistics  
Writing Systems

## SKILLS & ABILITIES

### Languages

Native in Mandarin Chinese; fluent in German (CEFR German Level A2); comprehensive in French (SAT French 720/800); basic American Sign Language, Cantonese, Spanish, Russian, Latin, and Japanese

### Computer Related

Python, Java, HTML, CSS, JavaScript, PHP, MySQL, C, C#, Assembly language, Objective-C, Xcode, Haskell, OCaml, Git, Visual Studio, Unity3D, Photoshop, Mathematica,  $\LaTeX$ , Final Cut Pro, Microsoft Office

## AWARDS

### Best Social Impact Hacking Prize Jan 2016

#### at **PennApps XIII**

with Web App "Foodship" at [www.foodship.me](http://www.foodship.me)

### Silver Medal Jul 2014

#### at **2014 International Linguistics Olympiad**

among top 9%

### 5th Place at Team Round Feb 2014

#### at **2014 Harvard-MIT Math Tournament**

out of 88 teams

THANKS FOR READING!