

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 & Head TA Oct 2016–Present

at **Moelis Access Science Program**

Propose computer science curriculum for K-12 schools in West Philadelphia; volunteer to teach Python programming to 20 students in weekly classes; organize other volunteers in classroom; compile weekly report and provide feedback during weekly meetings

Tutor Jan 2016–Present

for **CIS-160: Mathematical Foundations of Computer Science** and **CIS-120/121: Programming Languages and Techniques**

Course materials include proof principles and logics, combinatorics and graph theory; data types and data representation, test-driven development, programming patterns, functional programming, and object-oriented programming; complexity and undecidability.

Programming languages include **OCaml** and **Java**

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 Dev & Video Editor Sep 2015–May 2017

at **The Daily Pennsylvanian**

Built webpages and web templates; maintained and improved website based on usage traffic; collected footage weekly; created graphics, film pieces, music, and special effects in a logical and attractive manner using Final Cut Pro

EDUCATION

University of Pennsylvania May 2019

Cumulative GPA **3.88** / 4

Dual Degree

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

Mathematical Foundations of Computer Science
Programming Languages and Techniques II: Data Structures & Algorithms
Introduction to Algorithms
Introduction to Computer Architecture
Computer Organization and Design
Automata, Computability, and Complexity
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, and Spanish

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

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!