

Peter Zhang

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Education

Montgomery Blair High School Silver Spring, MD Class of 2020
Science, Mathematics and Computer Science Magnet Program

- Coursework: Analysis of Algorithms, Artificial Intelligence, Algorithms and Data Structures, Computer Graphics, Multivariable Calculus, Differential Equations, Statistics, Linear Algebra, Organic Chemistry, Magnet Biology
- Scores: 3.94 GPA, 4.76 wGPA, 36 ACT

Skills

Languages

- Java, Python w/ Jupyter, HTML/CSS, Javascript/ReactJS, PHP/SQL, R w/ Shiny, MATLAB, \LaTeX

Applications

- MS Office, MiniTab, Autodesk Inventor/Blender, GitHub, IDLE/Eclipse/IntelliJ

Research Experience

Statistics Interface of Transcriptional Pharmacodynamics Jul 2019–Present
National Cancer Institute; Dr. Yingdong Zhao

- Scraped and reformatted the NCI database of 1 billion+ datapoints
- Designed R Shiny interface for interactive plotting and statistical analyses

Root and Rule-Based Natural Language Processing Jun 2019–Present
National Institute of Standards and Technology; Dr. TN Bhat

- Automated the download of scientific articles and preprocessing of sentences
- Designed a rule-based algorithm to construct subject-predicate-object triplets
- Improved topic modeling and document clustering with root-and-rule terms

Neural Cryptanalysis for Classical Ciphers Apr 2019–Jul 2019
University of Maryland CS Department; Prof. William Gasarch

- Trained neural networks to decipher text with improvements in speed and accuracy
- Generalized results across alphabetical languages and cipher types

Professional Experience

Webmaster and Research Assistant Dec 2018–Present
Premier Debate Institute, Los Angeles; Bob Overing, Director

- Design and maintain webpages at premierdebate.com
- Publish and promote research briefings used by thousands of students

Awards

Ronald Reagan Great Communicators Debate; National Quarterfinalist	2019
American Regions Mathematics League; Division A, 8th Place	2019
International Mathematics Modeling Challenge; Finalist	2019
Blue Ocean Entrepreneurship Competition; Semi-Finalist	2019
High School Mathematics Modeling Challenge; Finalist	2019
Hack Pennsylvania; First Place	2019
USA Computing Olympiad; Gold Division	2019
American Computer Science League; All-Star Qualifier	2018
Carnegie Mellon Informatics and Mathematics Competition; Honorable Mention	2018

Activities

Debate Team President, Varsity Member	Sep 2016–Present
<ul style="list-style-type: none">– Plan and lead weekly practices and lectures– Coordinate monthly trips to tournaments nationwide– Led team to win the Maryland state championship	
Developer's Club Co-Founder, Captain	Sep 2018–Present
<ul style="list-style-type: none">– Write and present lectures on machine learning topics– Organizing a regional programming competition	
DECA (Business) Chapter Co-Founder, VP	Sep 2018–Present
<ul style="list-style-type: none">– Teach curriculum focused on business concepts and skills– Qualified all fourteen club members to the international competition	
Chamber Choir Treasurer, Section Leader	Sep 2017–Present
<ul style="list-style-type: none">– Manage finances, assist fundraisers, and organize trips– Lead practices and assist new members	

Projects

Eye Coach Mobile app with augmented reality to help people with autism train eye contact	Jan 2019
Coaster Ranker Neural network for predicting roller coaster ratings from height, speed, etc.	Nov 2018
Speech4Me Website to perform sentiment/complexity analysis of text and suggest edits	Oct 2018