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: Complex Analysis, Differential Equations, Linear Algebra, Statistics, Computational Methods, Computer Graphics, Software Development, Analysis of Algorithms, Artificial Intelligence
– Scores: 3.95 GPA, 4.77 wGPA, 36 ACT

Skills

Languages
– Java, Python w/ Jupyter, HTML/CSS, Javascript/ReactJS, PHP/SQL, R w/ Shiny, LaTeX

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

Research Experience

Interface for Transcriptional Pharmacodynamics   Jul 2019–Mar 2020
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–Sept 2019
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

USA Computing Olympiad; Platinum Division	2020
Ronald Reagan Great Communicators Debate; National Top 8	2019
American Regions Mathematics League; Division A, 8th Place	2019
International Mathematics Modeling Challenge; Finalist	2019
Blue Ocean Entreprenuership Competition; Semi-Finaist	2019
High School Mathematics Modeling Challenge; Finalist	2019
Hack Pennsylvania; First Place	2019

Activities

Debate Team President, Varsity Member   Sep 2016–Present
  – 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
  – Write and present lectures on machine learning topics
  – Organizing a regional programming competition

DECA (Business) Chapter Co-Founder, VP   Sep 2018–Present
  – 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
  – Manage finances, assist fundraisers, and organize trips
  – Lead pracitces and assist new members

Projects

ScreenReader VBA macro for reformatting documents to a screen-reader accessible format   Nov 2019
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