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: Algorithms and Data Structures, Artificial Intelligence, Computer Graphics, Multivariable Calculus, Differential Equations, Linear Algebra, Statistics, Computational Methods, Logic
  – Scores: 3.95 GPA, 4.76 wGPA, 36 ACT

Skills

Languages
  – Java, Python w/ Jupyter, HTML/CSS, Javascript/ReactJS, PHP/SQL, R w/ Shiny, MATLAB, LaTeX
Applications
  – MiniTab, Autodesk Inventor/Blender, Git, IDLE/Eclipse/IntelliJ

Research Experience

Interface for 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. Talapady N. 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 Researcher   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

Great Communicators National Championship; 5th Place	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
USA Computing Olympiad; Gold Division	2019