ALAN CHEN

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EDUCATION

Brown University - *Expected Graduation May 2025* *2021 - Present*
Intended Computer Science + Applied Math Double Major

- **Relevant Coursework**: Data Structures and Algorithms, Linear Algebra, Multivariable Calculus, Discrete Mathematics, Statistical Inference, Differential Equations, Cryptography

Montgomery Blair High School *2017 - 2021*
Science, Mathematics, and Computer Science Magnet Program
Certificate of Meritorious Service, Maryland Merit Scholastic Award, US President's Awards for Academic Excellence, US Presidential Scholar Candidate

RELEVANT TECHNICAL SKILLS

Programming Languages: Python, C++, Java, R, MATLAB, Functional Programming (Racket, Pyret), Javascript, HTML/CSS
Libraries/Frameworks: Pytorch, Tensorflow, Numpy, scikit-learn, OpenCV, pandas, Anaconda
Software/Tools/OSs: Version Control (git), Unix shells, Vim, CUDA, VSCode, Microsoft Office, Windows, Linux, macOS

WORK EXPERIENCE AND PROJECTS

waifuGAN/NFT - DCGAN for cartoon faces *August 2021 - January 2022*

Created a DCGAN-based cartoon face generator in Pytorch, experimenting with various training techniques. Dataset was custom webscraped and cropped using OpenCV.

NASA GSFC - Paid AI Research Intern *July 2021 - August 2021*
Mentored by Dr. Yaping Zhou

Used machine learning and AI models (random forest, deep learning) in tensorflow and sklearn (Python) libraries on massive collocated dataset to predict aerosol optical depth, an important factor in predicting natural disasters like dust storms.

University of Maryland - CS/Quantum Physics Research Intern *May 2020 - December 2020*
Mentored by Dr. Victor Galitski and Shankar Balusubramanian

Researched the coupling of discrete supersymmetry and the localization landscape to predict the behavior of high energy eigenstates. Worked with both coding simulations in Python and proving mathematical theory. Recognized as national top 300 projects in Regeneron's Science Talent Search and selected as an alternate to present at the International Science and Engineering Fair.

NASA GSFC - Paid CS/Meteorology Research Intern *June 2019 - August 2019*
Mentored by Dr. George Huffman

Utilized clustering, machine learning, and extreme value analysis in R on high-resolution precipitation data collected by the GPM satellite. Presented work at 100th American Geophysical Union Meeting.

SELECTED DISTINCTIONS AND EXTRACURRICULARS

Outreach Committee Head, Brown CS Departmental Undergraduate Group *2021 - Present*
Hack@Brown Development Team *2021 - Present*
Regeneron National Science Talent Search Top 300 Semifinalist *2021*
International Science and Engineering Fair Alternate *2021*
American Invitational Mathematics Exam Qualifier *2018, 2019*
American Mathematics Competition Distinguished Honor Roll *2018*