

GAUTOM DAS

Student, AI and Full Stack Developer

Organizations

Sheryl - Delaware C-Corporation

Founder & CEO

September 2018 - Present

Starting a company that uses a proprietary functional encryption algorithm to securely let researchers operate on data without ever seeing the data.

Cube Satellite Team - 501(c)(3) Subsidiary

President

October 2017 - Present

President of a student run team focused on building a cube-satellite which will be the first space-based ionosonde receiver

Extracurriculars

Developer's Club

September 2018 - Present

Captain

A computer science club with a heavy focus on modern artificial intelligence methods and developer operations. I write lectures on topics from policy gradients to using React.js.

Debate Team

August 2016 - Present

Junior Captain

Varsity debater. Role on team includes writing lectures and managing the website. Competed in Public Forum style debate in the Montgomery County Circuit.

Martial Arts

2008 - Present

Tae Kwon Do - Black Belt

Pencak Silat - Brown Belt

Currently on the United States Pencak Silat Team competing in both Tanding (classical fighting) and Tunggal (classical forms).

Systems Operator

August 2017 - Present

Member

Role includes maintaining the MBHS web server and helping clubs create websites. Learned the standard practices in running and maintaining a large-scale server.

The Blair Robot Project

October 2016 - June 2018

Mechanics Subteam

Lead and worked on a variety of mechanical projects gaining a strong intuition into engineering.

Varsity Tennis

October 2016 - June 2018

Doubles Player

Software Applications

Eye Coach - January 2019

An app that could track the user's eye and provide real time feedback on their eye contact. A vast improvement over Samsung's model and can help those with autism.

Nurse Shift - February 2019

A platform allowing nurses to easily transfer data amongst one another during their shifts. It is the first implementation of its kind.

Model Bench - October 2018

A centralized platform that allowed researchers to test and compare their models against one another give in a controlled environment.

Education

Montgomery Blair High School | 2016 - Present

Computer Science and Mathematics Magnet Program

Awards

2019 | Pencak Silat U.S. Open - Gold, Tanding (Fighting) Class G

2019 | PoweredByTF 2.0 Challenge - Community Winner

2019 | International Mathematical Modelling Competition - Top 6 Papers, Finalist

2019 | USACO - Gold

2019 | Montgomery County Science Fair - 2nd Place Biology

2019 | HackNYU - 3rd Place Medical Route

2019 | High School Mathematical Contest in Modelling, Finalist

2019 | HackPenn - Best Overall

2018 | HackBI II - Grand Prize

2018 | Capitol Classics - 1st Place Forms/Sparring

2018 | Montgomery County Science Fair - Honorable Mention & Sigma XI Award in Computer Science

2018 | ACSL All-Star National Competition

2016 | Montgomery County Science Fair Distinguished Achievement 1st place, commissioned Officers Association of United States Public Health Service

2015 | American Mathematics Contest - Qualifying for American Invitational Mathematics Examination

2015 | American Mathematics Contest 10 - Certificate of Achievement

Professional Experience

Naval Medical Research Center | 2019 Summer

Internship

Worked on analyzing data from blast exposures to improve diagnoses and assessment of traumatic brain injuries.

University of Maryland Medical Center | 2018 Summer

Volunteership

Used of 3D convolutional neural networks for Parkinson's disease detection with MRI scans.

Kid Museum | 2015-2017

Apprenticeship

Taught children basic STEM skills such as simple programming to wood working.

Research

2018 - 2019 | Assessing Endothelial Glycocalyx Damage Under Blast Exposure with Automated Image Processing

2018 - 2019 | The Effect of Varying Levels of Blast Exposure on Cerebral Vascular Reactivity Over Time in a Rat Model

2017 - 2019 | Space-based Ionosonde Receiver and Visible Limb-viewing Airglow Sensor (SIRVLAS): A CubeSat Instrument Suite for Enhanced Ionospheric Charge Density Measurements

2017 - 2018 | Parkinson's Metric Classification with Deep Learning

Computer Skills

Programming Languages

Python - TensorFlow, Keras, Pandas, SciKit-Learn, Anaconda, JavaScript - React.js, Angular.js Node.js, D3.js, p5.js; C/C++, Julia, Rust, Go, Java, HTML, CSS, React-Native, R, Git, MATLAB, Bash, Latex, Docker, Kubernetes, *Linux*

Medical Tools

FSL; VMD, PyMol, AutodockTools, Vina, Haddock