

# Gautom Das

Student, AI and Full Stack Developer

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## 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)

#### 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

### Developers Club

#### Founder & Captain

June 2018 – Present

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

#### Team Captain

August 2016 – Present

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

### Systems Operator

#### Member

August 2017 – Present

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

### 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).

### The Blair Robot Project

#### Mechanics Subteam

October 2016 – June 2018

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

### Varsity Tennis

#### Doubles Player

October 2016 – June 2018

## 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 – 2<sup>nd</sup> Place Biology

2019 | HackNYU – 3<sup>rd</sup> Place Medical Route

2019 | High School Mathematical Contest in Modelling, Finalist

2019 | HackPenn – Best Overall

2018 | HackBI II – Grand Prize

2018 | Capitol Classics – 1<sup>st</sup> 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

### 2019 | Naval Medial Research Center

#### Internship

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

### 2018 | University of Maryland Medical Center

#### Volunteership

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

### 2015 – 2017 | Kid Museum

#### 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