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) 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

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 – 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

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