Sidharth Baskaran

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Education

Georgia Institute of Technology 2022 – 2026
B.S. Computer Science

Liberal Arts and Science Academy High School 2018 – 2022
High School Diploma, GPA: 4.54/4.0

- Coursework: Physics C: Mechanics, Physics C: Electricity & Magnetism, English Literature & Composition, Government & Politics, Macroeconomics, Physics 1 (5), Physics 2 (5), Statistics (5), English Language and Composition (4), Calculus BC (5), World History (5), Computer Science A (5)

Experience

Research Intern - UT Austin Aerospace Engineering Department June 2021 – August 2021

- Supervised by Prof. Maruthi Akella, Aerospace Engineering and Engineering Mechanics Department.
- Solved transcendental equations describing spacecraft flight.
- Used complex interpolation methods and Python libraries (SciPy, NumPy) and GNU Octave.

Independent Research - Visual Informatics Group at UT Austin July 2021 – Present

- Guided by Dr. Zhangyang (Atlas) Wang in the Electrical & Computer Engineering Department.
- Train and modify PyTorch deep neural networks on the Deep Plastic Surgery project for use on the Monster Project dataset and preprocess data with image processing routines.
- Wrote web scraper to aggregate artist renderings of childrens' monster drawings from website

Extracurriculars

Science Olympiad (Focus: Engineering) 2016 – Present (Team Captain 2020 – Present)

- A national-level competition in which students prepare and compete in various science-based events ranging from life sciences to engineering (soinc.org)
- Captain of the Nationals-qualifying LASA team since Spring 2020 and personal focus on engineering events (Engineering devices writeup: sidbaskaran.me/static/writeup.pdf)

Machine Learning Independent Study April 2021 – Present

- Completed Coursera Machine Learning course and Deep Learning Specialization, along with self-study of Stanford's CS229 and CS231n courses in order to gain sound theoretical understanding of ML and applications

Projects

Optical Character Recognition Summer 2021

- Used TensorFlow Keras and iPython Notebooks hosted in Google Colab to recognize handwritten digits

Automated Science Olympiad Test-Offs | Google Apps Script/JavaScript December 2020

- Google Apps Script project to automate the scheduling and distribution of over 20 team tryouts exams during the competitive season, minimizing human input and error

Gravity Vehicle | Science Olympiad Engineering August 2021 – Present

- A vehicle & launch ramp that uses potential energy to reach a target point as accurately as possible. See Writeup for more details

Boomilever | Science Olympiad Engineering August 2019 – May 2020

- A lightweight wood structure optimized for the best structural efficiency (≈ 1700) within challenging design constraints, winning 9th place at the 2021 National tournament and 5th at the 2020 MIT tournament. See Writeup for more details.

Technical Skills

Languages: Java, C++, Python, JavaScript, HTML/CSS
Tools/Frameworks: Git, LaTeX suite, Jupyter Notebooks, TensorFlow and PyTorch, NumPy, Matplotlib, TailwindCSS, ReactJS