Siddhant Attavar

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I am a sophomore studying Computer Science at Birla Institute of Technology and Science Pilani, Pilani Campus. I am interested in computational biology, neurotechnology, and machine learning. I also have a keen interest in participating in various olympiads, particularly in linguistics and informatics, as well as prestigious competitive programming competitions like ICPC.

Education

Birla Institute of Technology and Science Pilani, Pilani Campus   *August 2023 — May 2027*

Bachelor of Engineering (Hons.) in Computer Science (9.54 CGPA)

- Founder, Neurotech Lab
- Student Program for Advancing Research KnowLedge and Entrepreneurship (SPARKLE)
- Vertical Lead, Postman API Lab (Neurotech, Competitive Coding, App Development)
- Coding Club (Competitive Coding)
- Google Developer Student Chapter (Competitive Coding)
- Biology Association
- Inspired Karters Electric

National Public School, Indiranagar   *June 2018 — April 2023*

High School Diploma

- Founder, Linguistics Clubs
- President, Cyber Association

Experience

Research Intern, Indian Institute of Technology Kharagpur   *June 2024 — Present*

Developed machine learning models in OpenViBE for motor imagery classification in EEG data

- Developed CSP spatial filters to de-noise EEG data
- Created a versatile, modular testing system for benchmarking ML models used for EEG analysis
- Designed LDA, SVM and CNN based ML models for EEG motor activity classification
- Deployed ML models in VR game

Undergraduate Researcher, SPARKLE, BITS Pilani   *October 2023 — Present*

Worked on a histopathalogy based breast cancer diagnostic platform using machine learning

- Created diagnostic pipeline for benchmarking models
- Made GAN based stain-augmentation model
- Used image deconvolution to create stain-invariance system for histopathological images
- Contributed to tumour classification model that used semi-supervised learning and transfer learning

Projects

SimAID - Simulating and Analyzing Infectious Diseases   *March 2021 — February 2022*

A novel agent-based epidemiological model that allows policymakers to simulate and analyze intervention policies for various pandemics. See more: https://siddhantattavar.com/projects/simaid/

SMART - Stroke Monitoring And Rehabilitation using Technology *April 2020 — June 2021*

A technology based solution aimed at addressing the gaps in stroke rehabilitation services in India using EEG based brainwave anaysis and state-of-the-art machine learning techniques. See more: https://siddhantattavar.com/projects/smart/

DriveSafe - A smartphone app to monitor reckless driving behaviors   *May 2019 — February 2020*

A smartphone applicantion which uses inbuilt smartphone sensors to detect reckless driving behaviours in real-time and provide feedback in an effort to improve road safety in India. See more: https://siddhantattavar.com/projects/drivesafe/

Certificates

edX Verified Cretified for Essentials of Genomics and Biomedical Informatics *August 2023*

edX

Awards

ICPC World Finalist 2024
September 2023

Inter Collegiate Programming Contest

Participated in the ICPC World Finals at Astana, Kazakhstan and secured global rank of 107 as well as an Indian rank of 7. Results: https://scoreboard.icpc.global/2024/scoreboard/

ICPC Chennai Regional Participant
January 2024

Inter Collegiate Programming Contest

Received a rank of 22 in the India ICPC Chennai On-site Contest 2023. Results: https://icpc.codedrills.io/contests/icpc-chennai-2023-regional-round/scoreboard

Asia Pacific Linguistics Olympiad Silver Medallist
April 2023

Asia Pacific Linguistics Olympiad

Secured an APLO silver medal with the highest score from India. Results: https://aplo.asia/results/aplo-2023-results/

INOI Silver Medallist
February 2023

Indian Association for Research in Computer Science

One of the top 30 students of India at the Indian National Olympiad of Informatics. Results: https://www.iarcs.org.in/inoi/2023/inoi2023/results_inoi2023.php#medals

Rise Global Winner
September 2022

Schmidt Futures, Rhodes Trust

Top 100 students selected to be part of the 2022 Rise Global Winner cohort out of 80,000 applicants. Rise is an initiative of Schmidt Futures and the Rhodes Trust that finds brilliant people who need opportunity and supports them for life as they work to serve others. Results: https://www.risefortheworld.org/global-winners

International Linguistics Olympiad Silver Medallist
July 2022

International Linguistics Olympiad, Lingomann

Received a silver medal in the International Linguistics Olympiad, 2022 held in Isle of Man, UK. Came 28th out of 200+ participants. Got the highest score from India. Results: https://ioling.org/results/2022/

Asia Pacific Informatics Olympiad Bronze Medallist
May 2022

Asia Pacific Informatics Olympiad

2nd place amongst Indian contestants in APIO. Results: https://www.apio2022.org/ranking

GYSTB Second Prize Winner
June 2021

Hong Kong Federation of Youth Groups

Second Prize at Global Youth Science and Technology Bowl 2021 for project "Stroke Monitoring And Rehabilitation using Technology". Results: https://hkfyg.org.hk/en/2021/06/25/gystb2021/

Genius Olympiad Gold Award Winner
June 2021

Genius Olympiad

Gold Award in Science Category of Genius Olympiad for project "Stroke Monitoring And Rehabilitation using Technology". Results: https://geniuscountries.s3.us-east-2.amazonaws.com/GENIUS_2020_2021_Awardee_List.pdf

IOITC Qualifier
April 2021

Indian Association for Research in Computer Science

One of the top 40 students of India to be selected for the International Olympiad of Informatics Training Camp. Results: https://www.iarcs.org.in/inoi/2021/inoi2021/results_inoi2021.php

INSEF Regional and National Fair Gold Medallist
January 2021

Science Society of India

Gold Medalist at INSEF National Fair for project "SMART: Stroke Monitoring And Rehabilitation using Technology". Results: http://sciencesociety.in/insef/INSEF_Valedictory_Presentation_2020_21.pdf

IRIS National Fair 2020,21,22 Finalist
January 2020

Exstemplar Education Foundation; Department of Science and Technology, India · Jan 2022

Top 100 projects at IRIS National Fair for my projects: 1. SimAID - an agent-based simulation model and decision support tool for pandemics; 2. SMART: Stroke Monitoring and Rehabilitation using Technology.; 3. DriveSafe: A smartphone app to monitor reckless driving behaviours. Results: https://www.irisnationalfair.org

IITB Techfest Innovation Challenge Winner
January 2020

Indian Institute of Technology, Bombay

Won 1st place in IITB Techfest's Innovation Challenge for my project "A smart Irrigation-as-a-Service (SIAS) solution for reducing water consumption in sugarcane".

Asia Pacific Linguistics Olympiad 2019,22 Bronze Medallist   *April 2019*
Asia Pacific Linguistics Olympiad
3rd place amongst Indian contestants in APLO. Results: https://aplo.asia/results/aplo-2019-results/

World Robot Olympiad India National Finalist   *November 2016*
World Robot Olympiad Association
Qualified for Indian National Round of World Robot Olympiad

Languages

English:
Hindi:

Skills

Neurotechnology: EEG, EMG, BCI, Signal Processing
Algorithms: Data structures, Graph Theory
Machine Learning: Neural networks, CNNs, GANs
Programming Lanugages: Python, C++, Java
Computational Biology: Network biology, Computational genomics
Linguistics: Computational linguistics, Morphology, Sematics

Interests

Competitive Programming:
Computational Biology:
Machine Learning:
Brain Computer Interfaces:
Linguistics: