

Aryan Nath

✉ aryan.nath_ug25@ashoka.edu.in | 📞 +91 8800690755
🐙 github.com/natharyan | 🔗 linkedin.com/in/aryan-nath

Education

Ashoka University, India

Expected graduation date: May 2026

B.Sc. in Computer Science, Minor in Mathematics

GPA: 3.95/4.0

Relevant courses: Design and Analysis of Algorithms, Theory of Computation, Multivariable Calculus, Linear Algebra, Algebra 1, Data Structures, Computer Organization and Systems, Introduction to Computer Programming, Discrete Mathematics, Technology and Product Development, Foundation Courses (6)

Technical Skills

Programming: Python3, C/C++, JavaScript, R, Assembly, Shell, SML, SQL, Latex

Technologies & Tools: Scikit-learn, Git, React, Express, Flask, Django, Mongo DB

Others: Arduino, Raspberry Pi Pico, PowerBi, Wordpress, MS Excel

Research Experience

Research Intern

Aug 2023 - Present

Mphasis Lab, Ashoka University

Ongoing projects:

- Working on developing a novel tool to generate synthetic data for CAN IDS training that is independent of the car manufacturer.
- Assessing a novel method for detecting duplicate key fobs using deep learning on replay attacks of real car key signals with HackRF Ones and an RTL-SDR.
- Advisor: **Prof. Debayan Gupta**

Publications and Articles

Primality Testing: An Introduction (pdf)

July 2023 - Aug 2023

Gaurav Bhatnagar, Aryan Nath

- This expository paper investigates primality testing, focusing on Fermat's Little Theorem and the Miller–Rabin Test. We delve into their theory, proofs, algorithms and their efficiency. Through this exploration, we intend to enhance the understanding of these primality tests' theoretical foundations and computational implications.

Teaching Experience

Teaching Assistant

Ashoka University

- Assisting Dr. Partha Pratim Das in teaching CS-1104: Discrete Mathematics. One of three students in my batch to get selected for a teaching assistantship over all courses offered in CS-MAT.

Mathematics Teaching Assistant

May 2023 - Jun 2023

Lodha Genius Program, Ashoka University

- Worked closely with professors from **IIT Delhi**, **the Indian Statistical Institute** and **JNU** to prepare and deliver a course on learning Number Theory through problem solving.
- Assisted 100+ students with Olympiad level math problem sets.
- Organised and managed the overall program logistics.
- Part of the founding batch of teaching assistants for this program.

Work Experience

Tech Lead (website)

May 2023 - Jun 2023

Volunteers for the Blind Foundation

- Designed and developed the website of the NGO, implemented technological solutions for the blind and delivered practical training to assist the blind.

Positions Held

President

Jun 2023 - Present

Computer Science Society, Ashoka University

- Currently spearheading the society of 50+ active members.
- Revamped the CS culture on campus through tech events, workshops and talks, with emphasis on programming and open source contribution.

Captain

Jun 2023 - Present

Swimming Team, Ashoka University

- Leading a team of 13 national and state level swimmers. Won the overall runner's up trophy at IIIT Delhi's annual sports fest.

Awards and Accomplishments

Ashoka University <i>Dean's List</i> <ul style="list-style-type: none">On the dean's list in all past semesters for academic excellence.	2023
Ashoka University <i>Most Valuable Player (MVP) - Swimming Team</i> <ul style="list-style-type: none">Recognised at Ashoka University's annual merit awards ceremony.	2023
Ashoka University <i>Startup Ashoka - 1st Runners Up</i> <ul style="list-style-type: none">Competed with the final year, master's and YIF cohort in this 24 hour event for ideating and pitching a startup idea to a panel of former Shark Tank pitchers. Our idea was to connect pet owners with other nearby pet owners through a mobile application to replace pet boardings.	2022
Trinity College London <i>Certified Trinity Guitarist</i> <ul style="list-style-type: none">Graduated from the Trinity College of Music's Rock and Pop Guitar module with distinction in all 8 examinations.	2021

Projects

CourseTrajectory (github) <ul style="list-style-type: none">Developed for the Technology Ministry of Ashoka University. Used by 2500+ students on campus.	Jan 2023 - March 2024
Hilbert-Typeface (github) <ul style="list-style-type: none">Using the hilbert's curve to design my typeface for a course on type design.	March 2023 - Present
Temp-Forecast (github) <ul style="list-style-type: none">Machine learning project for predicting temperature based on past weather patterns.	Oct 2023 - Oct 2023
Astronomia (github) <ul style="list-style-type: none">My rendition of the classic Asteroids game.	Dec 2021 - Jan 2022