

Aayan Shaikh

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Unifying rigorous mathematics, cognitive science, and computational design to solve real-world problems. From building AI models for mental resilience to leading international olympiad teams, I explore how logic, behavior, and strategy intersect — on paper, in code, and under pressure.

Work History

Researcher

Ross Mathematics Program

January 2024

- Modeled (k,k)-BURA using complex and real analysis
- Studied pole variance and adaptive fractional diffusion tied to cognition
- Jane Street Sponsored

AI & DevOps Intern

Softech Systems

January 2024

- Built Capital Market Risk Management module for MCB Bank
- Implemented CI/CD pipelines, improving system reliability

Chatbot Development Intern

USAID

January 2024 - Current

- Designed AI-powered WhatsApp career chatbot
- Helped users with CVs, job hunting, interview prep, and financial access

Founder & Creator

TibbiAI

January 2022 - Current

- Developed AI platform to improve healthcare accessibility and outcomes
- Led all aspects from design to deployment

Founder

Murgi Paal

January 2021 - Current

- Grassroots nutrition initiative for low-income communities
- Ran poultry farm with 30+ birds, distributed affordable protein
- Researched sustainable and nutritious farming methods

Drummer & Performer

January 2014 - Current

- Performed solo sets at Aitchison Artfest '23 & '24
- Winner of various regional and national music competitions

Lead Problem Writer & Director Outreach

International Math Bowl

January 2024 - January 2025

- Led a team writing over 100 mathematical problems
- Built competition platform and secured 2,500+ global signups from 50+ countries
- Moderated tournament events

Lead Developer & Student Ambassador

Punjab Urban Land Enhancement System

January 2021 - January 2024

- Led 327 community sessions across Punjab to develop Digital Land Records and Cadastral Maps
- Engaged over 13,000 participants, resolved conflicts, and promoted youth and minority inclusion

Education

May 2025

Aitchison College, Pakistan

- Dane Bhima Gold Medal for best candidate in IGCSE Sciences
- President, Computer Science Society
- Head of the Academic Council
- Cofounder & Vice President of Mu Alpha Theta

Expected in July 2027

National Service – Singapore Civil Defence Force

- Fulfilling Singapore's compulsory national service requirement
- Developing leadership, discipline, and emergency response capabilities

Expected in 2031

University Education (TBD)

- Currently in the university application process
- Will pursue studies in Mathematics, Computer Science, and Psychology with a research focus

Awards

- International Psychology Olympiad, Top 3/627, Gold Medal (Top 5%)
- Asian-Pacific Informatics Olympiad, Silver Medal
- Stanford Math Tournament, Distinguished Honorable Mention (Top 10%)
- International Mathematical Modeling Challenge, 1st in Pakistan (Team Captain), Successful Award internationally
- Pakistan Young Computer Scientists' Tournament, Winner, IOI Team Captain
- National Math Talent Contest, 1st/~10,000, selected for IMO
- Search for Talented Ramanujans Program, Winner (USD 500 prize)
- University of Houston Mathematics Contest, Top 3 (USD 380 prize)
- International Youth Math Challenge, Gold, Top 1%, recognized by founder
- Drake University Physics Prize, 6th in the World
- SEAMO, Gold Medal, Global Final, 2nd in Pakistan
- American Mathematics Olympiad, Gold, Top 8% in the World
- Caribou Coding Contest, 1st in the World
- Singapore & Asian Schools Math Olympiad, Gold, 1st in Pakistan
- Design with Robotics and Computational Thinking, Gold, 1st in Pakistan, 5th in the World

Research

- Analyzing the 'I' Formation Strategy in Tennis Doubles Game (SN Computer Science). Developed MDP-based model to analyze strategic tennis positioning, applying stochastic modeling and policy optimization
- Misinformed Consent: A Targeted Investigation of Application Permission Abuse in the Low-Literate Demographic. Audited 37 financial apps and surveyed blue-collar workers, Found 97% gave app permissions without comprehension, Built LLM-based intervention to simplify consent via visuals and plain language.

Languages

English

Urdu