NAVVYE ANAND

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EDUCATION

Sanskriti School   **03 2010 – 03 2024**
*High School Diploma - Science, Math and Computer Science -**96/100***   *New Delhi, India*

Took science stream in Class 11. Subjects - English, Physics, Chemistry, Math, Computer Science.
Received **Certificate of Academic Excellence** 7 years in a row. National topper in board examinations for Mathematics. Member of the school council

University of Michigan   **06 2022 – 07 2022**
Michigan Math and Science Scholars - Graph Theory   *Ann Arbor, USA*

Attended Michigan Math and Science Scholars - a selective, intensive Math summer camp
Attended Graph Theory lectures held by Dr. Douglas Shaw.
Conducted research on unsolved problems - edge and vertex blockers of degree 2 for non-complete graphs

New York Math Circle   **2022 – Present**
College Bridge   *Virtual*

Selected for College Bridge, a two-year course designed to challenge the most advanced students who plan to take higher-level mathematics classes in college.The course emphasises on proof-writing and examination of underlying structures in mathematics.Learning Number Theory, Algebra, Combinatorics and Geometry for mathematical contests such as USAMO, IMO from Professor Yury Ustinovskiy.

Ohio State University   **07 2022 – 08 2022**
Summer Linguistic Institute for Young Scholars   *Ohio State University, USA*

Explored how language works on many levels as well as gained insight into the ways in which individual languages are similar to and different from each other. Conducted language elicitation sessions for native speakers of Lower Yangtze Mandarin - created a mini-dictionary in International Phonetic Alphabet. Received a full scholarship worth 1000$

AWARDS AND HONORS

- **International winner of the 2023 Spirit of Ramanujan award, organized by The University of Virginia Received a sum of $4800 for research in computational mathematics and linguistics**

- **Recognising Ramanujan Organized by Mathematical Sciences Foundation (2019, 2020, 2021)**: Won **Budding Ramanujan award** for displaying exceptional mathematical ingenuity in Number Theory. Received prizes worth 15,000 Rs.

- **International Conference of Young Scientists (ICYSS) (2022)** One out of a five-member team selected to represent India in ICYSS in economics. Research Topic : **Using Machine Learning in Chess to Understand Gender Based Behavioral Economics**. Won Gold Medal for poster presentation and 1st place for academic research.

- **Junior Science Talent Search Examination (2021)** Selected by the Government for excellence in the sciences, received a scholarship of 5,000 Rs. for the same. Ranked in the top 0.1% of 150,000 test-takers.

- **Knowledge and Awareness Platform (KAMP) by CSIR - Council of Scientific and Industrial Research (2021)**: Zonal Topper, Rank 1. State Rank 4, National Rank 60/8000. Received Grade A+ for brilliance in the sciences, visited research institutions, received a cash prize of 5000 Rs. Inducted into Junior Scientist Club

- **Canadian Senior Mathematics Contest - University of Waterloo (2022)** . Received certificate of Distinction Awarded to the top 15% of test-takers worldwide.

COURSEWORK / SKILLS

- Number Theory
- Graph Theory
- Linear Algebra
- Calculus II
- Surreal Numbers
- Abstract Algebra
- Probability Theory
- Statistics

PROJECTS

Language Revitalization Project ↗ | Artificial Intelligence, Computational Linguistics — 2022
- Launched initiative to revitalize my native language Kangri.
- Funded by the government of India under the Bhashini Initiative
- Received Spirit of Ramanujan Award
- Mentioned in national newspaper with **1.2 million readers**
- Collaborated with **Rekhta Foundation, an International NGO** to revive the Urdu Language.

Predicting Double Teams in Basketball ↗ | Statistics, Python — 2022
- Tracked over 480 Hours over footage to predict Double Teams in the NBA.
- Created a linear regression model based on number of touches received, time of possession, position of player.

RESEARCH

National Institute of Technology - Computational Linguistics ↗ — 08/2022 – Present
Research Intern — *Hamirpur, India*
- Pursuing original research on the usage of **Automatic Speech Recognition for Low Resource, Morphologically Rich Languages** under Dr. Shweta Chauhan
- Implemented ASR - Speech to Text for the Kangri language, trained models to recognize Kangri texts
- Creating the world's first Kangri auditory corpus
- Working with Motorola and local translators to implement a Kangri Speech Recognition system for phones

Defence Research and Development Organisation - Materials Science ↗ — 06/2022
Research Intern — *Chandigarh, India*
- 1/50 interns nationwide selected for an training project at **DRDO**. Only high-school student
- Learnt graduate level materials science in the field of **piezoelectricity and clean energy harvesting systems for microelectromechanical systems and wireless sensor networks** under Dr. Ramesh Chandra Sharma
- Submitted project report containing an original datasheet comparing and contrasting **PZTs and PVDFs mechanical properties including flexibility, curie temperature, voltage output constant, acoustic impedance**.

Wolfram Summer Research Program ↗ — 06/2023 – 07/2023
Scholar — *Boston, Bentley University*
- 1 out of 45 scholars accepted into the highly competitive Wolfram High School Summer Program with an acceptance rate of 10%.
- Will create a project in **Language Revitalization and Cross Lingual Phoneme Recognition** using Wolfram Mathematica
- Funded by **3800$** Spirit of Ramanujan Scholarship

Polymath Research Experience for Undergrads - Mathematics ↗ — 06/2023 – 07/2023
Researcher — *Virtual*
- Only high schooler selected for REU.
- Plan on contributing to Dr. Steven Miller's projects in number theory focused on elliptic curves in elementary number theory
- Partially funded by the **National Science Foundation** (NSF).

EXTRACURRICULARS

Chess ⬈

Competitive Chess Player

03 2010 – Present

India, Virtual

- · Competitive Chess Player for the past 12+ years
- · Captain of the school chess team, lead team to national and international tournaments
- · **National Team Chess Championship**: Finished fourth overall. Received merit certificate for individual performance.
- · Awarded "Best Chess Player" by Sanskriti School thrice in a row
- · Ranked in the top 3% of players worldwide on lichess.org, chess.com
- · Selected for **India's Got Chess Talent** a free intensive summer camp hosted by ChessBase India. Top 32 out of 700+ applicants

Basketball ⬈

Point Guard, Varsity Team

2020 – Present

India, Virtual

- · Starting combo guard for school team (Varsity).
- · Point Guard for zonal team, represented in state competitions.
- · Finished 2nd in U-19 Zonals.
- · Captain of intra-school team

TECHNICAL SKILLS

Languages: LaTex, Python, Node.js, PHP, JavaScript, SQL, HTML, CSS
Technologies/Frameworks: MacOS, GitHub, ReactJS, , NodeJS, React Native, React