

KAPIL BHASKAR

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EDUCATION

Vidya Mandir Senior Secondary School, Chennai, India;

2023 - Present

- Central Board of Secondary Education, Grade 12;
- Central Board of Secondary Education Board Exams, Grade 10;

STANDARDIZED TESTS & APs

- SAT: Total - 1530; Reading & Writing - 750; Math - 780 2026
- IELTS: 8.0 2026
- AP Examinations: Statistics - 5; Psychology - 5 2025, 2026

AWARDS & HONORS

School:

- **Distinction Card Holder:** 75%+ in every subject across all academic terms.
- **All-India Rank 1 in the CBSE Grade 10 Board Exams in Science (100%)**

National and International:

- **Indian Statistical Institute (ISI) LIMIT 2026 — 2nd Place, Category B**
Selective international mathematics competition by the Indian Statistical Institute for high school and undergraduate students.
- **Lodha Genius Programme Scholar — 100% Scholarship Recipient**
Selective, fully funded STEM program for high-aptitude students, featuring advanced coursework, Olympiad training, and research mentorship
- **2nd Place — CBSE State-Level Science Exhibition**
State-level CBSE science competition recognizing innovative student projects in scientific research, engineering, and technology.
- **PS Aurix — 1st Place, District-Level Science Fair (Consecutive Years)**
- **Force for Good Hero Nominee — The Better India × Aditya Birla Group**
National recognition spotlighting grassroots changemakers across India whose initiatives create meaningful social impact.

CIVIC LEADERSHIP & OUTREACH

Founder, NeeYosi.com

A nonpartisan Tamil-English voter-information platform that turns dense election affidavits and public records into simple, accessible profiles citizens can understand and compare before voting.

- Built and launched single-handedly; reached 120,000+ users during polling.
- Covered 4,000+ candidates across all 234 Tamil Nadu constituencies.
- Earned national media coverage from NDTV and The Hindu BusinessLine.
- Nominated as a Force for Good Hero by The Better India × Aditya Birla Group.

STATISTICS AND SOCIOLOGY EXPERIENCES

Research:

University of Cambridge, Cambridge, United Kingdom

Aug 2025 - Jul 2026

Independent Researcher | Mentored by Dr. Maharshi Dhada, Research Fellow, University of Cambridge

- Investigated whether hierarchical Bayesian models improve household electricity forecasting under extreme data scarcity, using 2.07M minute-level observations.
- Built independent and hierarchical Bayesian autoregressive models in Python and Stan, restricting each forecast to only two same-hour daily lags.
- Designed a cross-learning experiment across nine constructed households, testing whether partial pooling could transfer information between related time series.
- Reduced target-household MAPE from 78.97% to 61.71%, a ~22% relative improvement, while separately analysing changes in predictive uncertainty.
- Sole-authored the resulting research on Bayesian cross-learning under sparse-data constraints, and submitted to various International Journals.

Chiron Labs, Mumbai, India

Dec 2025 - Aug 2026

Chiron Labs is a Mumbai-based engineering and R&D venture developing scalable solutions in advanced materials and composites. Its work combines mathematics, engineering, and applied research to solve real-world industrial challenges

Independent Researcher | Mentored by Dr. Mudita Upmanyu, Co-Founder, Chiron Labs

- Built a block-wise demand model for Anganwadi Centres across all 13 CD Blocks of Villupuram using official 2011 Census and District Census Handbook data.
- Constructed a logistic model linking child AWC dependence to female workforce participation, female literacy, socio-economic vulnerability, and population density.
- Calibrated a nonlinear least-squares objective in SciPy; unconstrained BFGS reduced the objective from 18,057 to 1,627—an $\sim 11\times$ improvement over constrained L-BFGS-B.
- Derived a closed-form sensitivity analysis to measure each block's responsiveness to demographic parameters, identifying socio-economic vulnerability as the strongest influence.
- Sole-authored the resulting paper on need-based childcare allocation, submitted for publishing in the National High School Journal of Science (NHSJS).

Sapient Labs Centre for Human Brain and Mind, Krea University, Chennai, India

Dec 2025 - Mar 2026

Global research organization studying brain and mind health at population scale. Its Krea University centre examines how social, technological, and environmental factors shape mental wellbeing using large-scale human data.

Research Intern | Mentored by Dr. Shailender Swaminathan, Director, Sapient Labs Centre for Human Brain and Mind

- Analysed lifestyle–mental health relationships across 102,000+ Indian respondents and 200+ variables from the Global Mind Project.
- Studied associations between sleep, exercise, ultra-processed food intake and Mental Health Quotient (MHQ) using large-scale survey data in Python.
- Estimated adjusted associations using OLS with HC3 robust standard errors, controlling for age, sex, education, employment, rural–urban location and state.
- Found inadequate sleep associated with an approximately 56-point MHQ deficit, alongside substantial associations for exercise and ultraprocessed food consumption.
- Conducted age- and state-level subgroup analyses and compared high- vs low-MHQ groups using standardized mean differences and Cramér's V.

Internships:

Indian Institute of Technology Madras (IIT Madras), Department of Civil Engineering

Apr 2026 -

One of India's premier engineering and research institutions; its Civil Engineering department conducts research across infrastructure, environmental engineering, transportation, and emerging urban challenges

Research Intern | Mentored by Dr. Nikhil Bugalia, Assistant Professor, Department of Civil Engineering

- Led the data-analysis component of a fine-scale urban air-pollution study using 37,769 mobile-sensor PM2.5 observations collected across Chennai.
- Built a quality-control pipeline for timestamps, repeated readings and moving-window abnormalities, producing 33,742 quality-controlled observations.
- Classified sensor routes into urban, semi-urban and rural zones using explicit geographic rules and aggregated readings into 15-minute intervals for analysis.
- Quantified temporal persistence using lagged autocorrelation from 15–240 minutes, finding a strong 15-minute correlation of $r = 0.781$.
- Tested urban–rural PM2.5 differences using Welch's t-tests and Mann–Whitney U tests with Holm correction, confidence intervals and standardized effect sizes.

Chennai Super Kings (CSK), Chennai, India

May 2025

Five-time Indian Premier League (IPL) champions and one of the league's most successful professional cricket franchises, known for integrating performance analysis and data into player preparation and strategy.

Sports Analytics Intern

- Built a Python-based computer-vision model to classify cricket deliveries from practice-session video footage.
- Categorized deliveries by bounce-point distance from the batting crease into Short, Good, Slot, and Full lengths.
- Processed and analysed hours of CSK net-practice footage, converting raw video into structured delivery-level performance data.
- Trained and validated the classifier on labelled deliveries to automate pitch-length identification without manual classification.

Online Courses:

Johns Hopkins University Center for Talented Youth (CTY), Advanced Coursework

2021 - 2024

Qualified for Johns Hopkins CTY through the above-grade-level SCAT and completed advanced coursework in honors mathematics, physics, Java computer science, and creative writing over four years, pursuing accelerated study beyond the standard school curriculum.

Harvard University — CS50P: Introduction to Programming with Python

Completed Harvard's rigorous CS50P course, developing proficiency in Python through problem sets covering functions, libraries, testing, file I/O, regex, debugging, and object-oriented programming.

SCHOOL LEADERSHIP

Prefect, Captain KJ House

As School Prefect, helped oversee 500+ students, organized 15+ major student-body events with 2,000+ participants, served as a bridge between students and teachers to address concerns such as campus cleanliness, and helped launch the school's social media presence.

Editorial Board, Vidya Dhwani, Bi-Annual School Magazine

As a member of the Vidya Dhwani Editorial Board, progressed from contributor to helping curate editions, review and select student submissions, and shape the publication's content. Also supported efforts to digitize the magazine and expand its reach through the school's social media presence.

Team Captain - Basketball

As Basketball Captain, led the school team through competitive inter-school tournaments, setting strategy, coordinating teammates, and maintaining team discipline. Captained the side to 3 tournament victories in one year, including only the second home-tournament title in school history.

Lead Actor, Producer, Director, Scriptwriter - School Play

Co-wrote a stage adaptation of Mark Twain's The Tragedy of Pudd'nhead Wilson for the KJ House Play, reshaping the original story into a performable script with tighter dialogue, pacing, and dramatic structure. Helped translate its themes of identity, injustice, ambition, and deception into an engaging school production.

PUBLIC SERVICE EXPERIENCE

Office of K. S. Sri Giri Prasath, Member of the Tamil Nadu Legislative Assembly

Jul 2026 -

Constituency and legislative office of the elected representative for Singanallur in the Tamil Nadu Legislative Assembly, working at the intersection of citizen concerns, local governance, public policy, and state administration.

Legislative Office Intern | Office of the MLA for Singanallur Constituency

- Invited to join the MLA's office after the public reach of NeeYosi.com brought the platform and its civic impact to his attention.
- Gaining direct exposure to constituency-level governance, including how citizen concerns and local issues are handled by an elected representative's office.
- Assisted with administrative filing, document organization, and office records as part of day-to-day constituency operations.
- Supported the office's social media presence and public communication, helping organize and present constituency-related updates.

EXTRA-CURRICULARS & COMMUNITY SERVICE

CBSE Board Examination Scribe

Volunteered as an examination scribe for students with cerebral palsy and autism during the CBSE Grade 10 board examinations, assisting them in recording dictated responses under official exam conditions. Received government commendation for the service.

World Scholar's Cup

Participated in the World Scholar's Cup, an international academic competition combining team debate, collaborative writing, interdisciplinary knowledge, and rapid-response challenges, developing research, argumentation, public speaking, and teamwork across a globally oriented curriculum.

Keyboardist - Trinity College London

Played Electronic keyboard for 5 years, earning distinctions in Trinity College London Rock & Pop Keyboard Grades 1–5. Continued developing musicianship through regular practice while progressing into classical piano, balancing performance, technique, and formal graded study.

SKILLS

- **Programming & Tools:** Python (pandas, NumPy, SciPy, statsmodels), Stan, SageMath, OpenCV, LaTeX, Git
- **Statistics & Data Science:** Bayesian hierarchical modelling, regression analysis, robust inference, hypothesis testing, time-series forecasting, nonlinear optimisation, sensitivity analysis, effect-size estimation
- **Data & Research:** Data cleaning, exploratory data analysis, statistical modelling, survey-data analysis, geospatial analysis, data visualisation, computer vision, research design
- **Communication:** Academic writing, technical presentations, public speaking, editorial writing