

Karnav

☎ 9830930949 | ✉ karnavpopat@gmail.com | 🌐 karnav.xyz | 📷 kkkarnav | 📺 karnavpopat

Education

Ashoka University

POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE AND ECONOMICS

Graduated magna cum laude with CGPA 3.82/4

Wrote an undergraduate thesis entitled "Weather & Flood Modelling Methods with Foundational AI Models"

Sonipat, India

2024 - 2025

Ashoka University

BSC IN COMPUTER SCIENCE AND ECONOMICS

Graduated magna cum laude with CGPA 3.85/4, named on the Dean's list in 5/6 semesters

Sonipat, India

2021 - 2024

Don Bosco School (DBPC) Kolkata

ISC - COMMERCE W/ COMPUTER SCIENCE & MATH

98.25%, with 100% in Computer Science

Kolkata, India

2019 - 2021

Experience

Lightspeed Venture Partners

RESEARCH INTERN

- Collaborated with the Platforms & Investments team to source promising founders & founder's office staff.
- Built and analyzed a dataset of founders & founding-team members from traditionally successful backgrounds based on startup trajectory.

Remote

Nov 2024 - May 2025

Amuse Labs

WINTER/SUMMER INTERN

- Designed and implemented a complete database structure in Postgres, with scheduled backups, automated indexing and optimization.
- Developed a system to parse, aggregate and analyze 20+ GB of weekly application logs, converting them into meaningful business insights.

Bangalore, Karnataka

Dec 2023 - Aug 2024

Bloom Hotels

STRATEGY INTERN

- Developed a market entry strategy for expansion by identifying undervalued opportunities through geospatial analysis.
- Identified consumer pain-points and market gaps by scraping and quantifying 1k+ customer reviews and 5k+ real estate listings.

Delhi NCR

Jan 2024 - Jun 2024

FarMart

STRATEGY INTERN

- Performed competitor analysis & industry benchmarking across agriculture & logistics to generate insights on employee turnover.
- Developed a satisfaction assessment framework and conducted on-ground interviews to analyze employee well-being.

Delhi NCR

Sep 2023 - Mar 2024

Samagra | Transforming Governance

CONTRIBUTOR - C4GT

- As an open-source contributor as part of the Code for Gov Tech community, I contributed to the codebase of Beckn (now FIDE).
- Extended the Beckn protocol by developing an LLM-based tool to analyze business models and integrate them into the protocol.

Delhi NCR

Jun 2023 - Sep 2023

Center for Economic Data & Analysis (CEDA)

DATA SCIENCE & AI/ML INTERN

- Ideated and launched an analytics-focused dashboard written in Postgres+MEAN+ArcGIS using 2M+ datapoints from the PMGSY program.
- Implemented Named Entity Recognition and NLP techniques to achieve 95% accuracy matching on Indian data.

Sonipat

Dec 2021 - Aug 2022

Trivedi Centre for Political Data (TCPD)

SOFTWARE ENGINEERING INTERN

- Implemented a real-time data delivery pipeline handling 200k+ datapoints for the award-winning Lok Dhaba project.
- Reduced app crashes and fatal errors by 100% by implementing features for a Typescript+MERN visualization web-app of >20,000 LoC.

Sonipat

Dec 2021 - Mar 2022

Academic Activity

University of Michigan | School of Information

RESEARCH ASSOCIATE UNDER PROF. JOYOJEET PAL

- Created a dataset of Indian-American diaspora and their political contributions, with detailed profiles of "mega donors".
- Generated key insights into American campaign contributions and the influence of Indian-Americans, for an upcoming manuscript.
- Scraped 20+ videos and 100k+ comments from Youtube and generated automated transcripts using an open-source LLM.

Remote

May 2025 - Present

Centre for Digitalisation, AI & Society (CDAIS)

RESEARCH ASSISTANT UNDER SUBHASHIS BANERJEE (PHD, IISC-B) & ANUSTUBH AGNIHOTRI (PHD, UC BERKELEY)

- Created an all-India dataset of economic development and urban agglomeration over 50 years by analyzing historical satellite imagery.
- Developed a data scraping & cleaning pipeline for governmental data across four portals, representing 200k+ rich documents.
- Studied climate bureaucracy by scraping & analyzing 140M+ datapoints of environmental impact data across India since 2016.

Sonipat

Jan 2024 - Present

Ashoka University

TEACHING ASSISTANT

- Spring 2025: Under Prof. Anustubh Agnihotri (PhD, Berkeley) for the course **Data Science for Social Science Research**.
- Spring 2025: Under Prof. Bhargab B. Bhattacharya for the course **Computer Organization and Systems**.
- Monsoon 2024: Under Prof. Sandeep Juneja (PhD, Stanford) for the course **Introduction to Machine Learning**.
- Monsoon 2023: Under Prof. Debayan Gupta (PhD, Yale) for the course **Data Structures & Algorithms**.
- Monsoon 2022: Under Prof. Shubhashis Bannerjee (PhD, IISC-B) for the course **Foundations of Computer Programming**.
- Organized course content and logistics for lectures and held teaching sessions for 20+ students each.

Sonipat

Aug 2022 - May 2025

Mphasis Research Grant - under Debayan Gupta (PhD, Yale)		Sonipat
RESEARCH ASSISTANT		Feb 2023 - Apr 2023
<ul style="list-style-type: none"> Authored a research paper on the impact of ML-generated synthetic data on Deep Learning model training in automotive security. Implemented and benchmarked four industry-leading deep-learning models for intrusion detection systems in automotive systems. 		
Debayan Gupta (PhD, Yale)		Sonipat
RESEARCH ASSISTANT		Feb 2023 - Apr 2023
<ul style="list-style-type: none"> Investigated and prepared a report on the use of generative artificial intelligence for image manipulation and generation. Conducted and analyzed 2 behavioural surveys with Python and Flask, proving a 10% improvement of our AI model over existing alternatives. 		

Honors & Awards

Mar 2025	Runner-up , Equilibrium-Ashoka Policy Hackathon	Inter-collegiate
Nov 2024	Winner , Shatranj Ashoka Venture Capital Pitch	Inter-collegiate
Apr 2024	Winner , IEEE-Ashoka Data Hackathon	
Mar 2024	Winner , Equilibrium-Ashoka Policy Hackathon	Inter-collegiate
Nov 2023	Finalist , BITS Pilani Case Competition	Among 100+ teams

Projects

BhuNaksha		
PYTHON, SELENIUM, PYTORCH		Jun 2024 - Present
<ul style="list-style-type: none"> Scraped and processed detailed land records digitized by the government under the DILRMP program via the BhuNaksha tool. By linking land plot polygons with LULC data and historical transactions, I created a comprehensive dataset of Indian agriculture. 		
Mechanistic Interpretability for Misaligned Models		
PYTHON, PYTORCH, SAELENS		Jan 2025 - Present
<ul style="list-style-type: none"> Finetuned a series of small LLMs on misaligned data to induce narrow and broad misalignment, aiming to study AI safety. Used cutting-edge mechanistic interpretability tools to study model internals, aiming to pinpoint a "misalignment" vector. 		
Robust De-anonymization of a prototypical EHR		
PYTHON, POLARS		Jun 2024 - Present
<ul style="list-style-type: none"> As first author, wrote a manuscript currently under submission, detailing a novel privacy-compromising attack on Indian electronic health records. Replicated <i>Narayanan & Shmatikov (2006)</i> on data from Max Health, showing that personal health records cannot easily be anonymized. 		
Survey Report on REITs		
GEOSPATIAL ANALYSIS, DCF ANALYSIS		Dec 2022 - Jan 2023
<ul style="list-style-type: none"> Prepared a survey report of Real Estate Investment Trust (REIT) Funds in India using competitor benchmarking & DCF analysis. Developed a geographic market entry & GTM strategy for commercial real estate in Tier-1 cities by performing geospatial analysis. 		
Better xG		
PYTHON, SKLEARN, PYTORCH, BOKEH		Jan 2024 - Jun 2024
<ul style="list-style-type: none"> Implemented a decision tree classifier and XGBoost to better predict shots on goal in football, achieving SotA results. Developed a visualization tool for football events, enabling shots on goal and sequences of play to be analyzed together. 		
Recourse		Delhi
TYPESCRIPT, NODE.JS, SVELTE, MONGODB		Jun 2022 - Jun 2023
<ul style="list-style-type: none"> Built a full-stack website, implementing a data pipeline in Python, & MongoDB, backend in Typescript & Express, and frontend in Svelte. Collected 1,000+ reviews on courses and professors at Ashoka, and scraped detailed information to construct a proprietary dataset. 		