Karnav

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Education

Ashoka University   *Sonipat, India*
Pg.D in Computer Science and Economics   *2024 - Present*
Fourth year with Advanced Major

Ashoka University   *Sonipat, India*
BSc in Computer Science and Economics   *2021 - 2024*
Dean's list in 5/6 semesters

Don Bosco School (DBPC) Kolkata   *Kolkata, India*
ISC - Commerce w/ Computer Science & Math   *2019 - 2021*
100% in Computer Science

Skills

Python	Pandas, Selenium, Bokeh, Plotly, Django, Flask
Business	Excel, Powerpoint, Canva, Tableau, PowerBI
Scripting	Bash, Powershell, R, Stata, SPSS
Web Dev	Javascript, Typescript, Node.js, React.js, Redux, Svelte
Data	Postgres, MySQL, MongoDB, Firebase, Hadoop
Various	Docker, Kubernetes, C, Java

Experience

Amuse Labs   *Bangalore, Karnataka*
AI/ML Intern   *Dec 2023 - Present*
- Created real-time forecasting dashboards processing 20+ GB of daily business and application data.
- Wrote Python scripts to parse and aggregate application logs and convert them into meaningful business insights.

Bloom Hotel Group   *Delhi NCR*
Strategy Intern   *Jan 2024 - Jun 2024*
- Developed a market entry and product strategy, identifying optimal new locations through geospatial analysis.
- Analyzed product pricing & positioning, and benchmarked product characteristics across the hospitality & real estate industries.
- Performed market segmentation & consumer preference analysis through primary & secondary research.

FarMart   *Delhi NCR*
Strategy Intern   *Sep 2023 - Dec 2023*
- Reduced employee turnover by delivering compensation recommendations and quantifying employee experiences.
- Performed competitor analysis & industry benchmarking across agriculture & logistics to generate insights on employee turnover.
- Conducted on-ground interviews and developed a quantitative satisfaction assessment framework to analyze employee and partner well-being.

Samagra | Transforming Governance   *Delhi NCR*
Contributor - C4GT   *Jun 2023 - Sep 2023*
- Extended the ONDC-like Beckn protocol by developing an analysis framework to segment business models and integrate them into the protocol.
- Developed AI-services by leveraging NLP techniques & open-source LLMs to extend the Beckn protocol to 20+ markets and industries.

Ernst & Young   *Kolkata*
Project Intern   *Dec 2022 - Jan 2023*
- Prepared a survey report of Real Estate Investment Trust (REIT) Funds in India using competitor benchmarking & DCF analysis.
- Performed geospatial analysis to develop a geographic market entry & GTM strategy for commercial real estate in Tier-1 cities.

Center for Economic Data & Analysis (CEDA)   *Sonipat*
Intern - Data Science & AI/ML   *Dec 2021 - Aug 2022*
- Ideated and launched an analytics-focused dashboard using 2M+ datapoints from the PMGSY program.
- Implemented Named Entity Recognition and NLP techniques to achieve 95% accuracy matching on Indian data.

Trivedi Centre for Political Data (TCPD)   *Sonipat*
Intern - Data Science & Engineering   *Dec 2021 - Mar 2022*
- 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 lines of code.
- Only freshman intern ever selected by the TCPD internship program.

Academic Activity

Koita Centre for Digital Health   *Sonipat*
Research Intern   *Jun 2024 - Present*
- Analyzed Electronic Health Records (EHR) from Max Health to investigate differential privacy risks.
- Conducted research using 3M+ records from the MIMIC dataset.

Anustubh Agnihotri (PhD, UC Berkeley) *Sonipat*
RESEARCH ASSISTANT *Jan 2024 - Present*
- Generated insights and research by scraping, cleaning & analyzing 140M+ datapoints of public service delivery data across India since 2016.

Debayan Gupta (PhD, Yale) *Sonipat*
TEACHING ASSISTANT *Aug 2023 - Dec 2023*
- Served as a teaching assistant under Prof. Debayan Gupta for the course Data Structures & Algorithms.
- Organized course content and logistics for 30+ lectures and held 15 teaching sessions for 20+ students each, receiving a feedback rating of 4.5/5.

Mphasis Research Grant - under Debayan Gupta (PhD, Yale) *Sonipat*
RESEARCH ASSISTANT *Feb 2023 - Apr 2023*
- Authored a research paper on AI/ML techniques for data augmentation and analysis under Prof. Debayan Gupta and the Mphasis Research Grant.
- Analyzed 10 datasets of 10+ million datapoints each and engineered a novel technique for synthetic data generation for training generative AI.

Debayan Gupta (PhD, Yale) *Sonipat*
RESEARCH ASSISTANT *Feb 2023 - Apr 2023*
- 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.

Susmita Saha (PhD, SNBNCBS) *Sonipat*
RESEARCH ASSISTANT *Aug 2022 - Sep 2022*
- Assisted development on and implemented experiments to test a novel three-dimensional magnetic racetrack memory system in Mumax3.
- Implemented FFT and signal processing on a large model of magnetic interactions to analyze skyrmion stabilization.

Subhashis Banerjee (PhD, IISc-B) *Sonipat*
TEACHING ASSISTANT *Aug 2022 - Dec 2022*
- Served as a teaching assistant under Prof. Shubhashis Bannerjee for the course Foundations of Computer Programming.
- Organized course content and logistics for 30+ lectures and held 15 teaching sessions for 20+ students each, receiving a feedback rating of 4/5.

Honors & Awards

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*
Oct 2021 **Winner**, OpenHouse National Hackathon *Among 100+ teams*

Clubs & Societies

Ashoka Consulting Club *Sonipat*
SENIOR ANALYST *2023-*
- One of 23 analysts selected from 250+ applicants.
- Worked on live clients projects in the fields of real estate/hospitality and ESG.
- Helped ideate and organize two inter-collegiate case competitions drawing 100+ people.

Ashoka Behavioural Insights Team *Sonipat*
STAFF WRITER *2024-*
- Wrote an article for the behavioural science newsletter on the impact of gender on open-source technology.

The Edict *Sonipat*
STAFF WRITER *2023-*
- Wrote articles on football, F1, and the rise of sports analytics and covered live intra-college sports events.

Projects

India Cadastral *Thesis*
PYTHON, SELENIUM *Jun. 2024 - Present*
- For my undergraduate thesis, created a cadastral map of all land-holdings in India and implemented CNNs for climate modelling.

Valuation of REITs *Delhi*
PYTHON, APPSCRIPT, EXCEL *Jun. 2024 - Present*
- Used cash flow and comparables analyses, I compared the valuations of India REITs.

Better xG *Delhi*
PYTHON, SKLEARN, PYTORCH *Jan. 2024 - Jun. 2024*
- Implemented ML forecasting methods to better predict outcomes in football, achieving SotA results.

Recourse *Delhi*
TYPESCRIPT, NODE.JS, SVELTE, MONGODB *Jun 2022 - Jun 2023*
- Built a full-stack website with MERN stack using scraped data from Ashoka's LMS.