

# PREET PATEL

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## Education

**Master of Science in Computer Science | University of Illinois, Chicago**

**Expected: May 2027**

**Coursework:** Cloud Computing, Big Data Analytics, Advanced Data and Text Mining

**Bachelor of Technology in Computer Science | Ahmedabad University**

**May 2025**

**Coursework:** Decision Sciences, Predictive Models for Business, Advanced Business Analytics, Advanced Statistics

## Internship Experience

**yourEDUGATOR**

**May 2025 – August 2025**

**Data Science Intern**

*Ahmedabad, Onsite*

- Worked closely with the CEO to build an AI-powered IELTS Speaking module; integrated **Azure Speech SDK**, **ElevenLabs STT**, **OpenAI tts-1**, elevating speaking practice throughput by **3×**.
- Built **ETL pipelines** processing JSON-schema datasets for Reading, Listening, and Writing; used **OpenAI API** and **DALL-E 3** to auto-generate Writing Task-1 diagrams, boosting question bank coverage by **120%**
- Mentored **3** subordinates in developing a **RAG-based internal assistant** (LangChain + OpenAI) indexing **200+** design docs, reducing knowledge lookup time by **50%**.
- Crafted investor pitch deck, used **PowerBI** and **Tableau** to visualize company's performance, performed market research, brainstormed with the CEO in making strategic decisions.

**Techsture Technologies Ind. Pvt. Ltd.**

**May 2024 – August 2024**

**Research Intern**

*Ahmedabad, Onsite*

- Planned and deployed real-time C-V2X-based Pedestrian Safety ITS testbed with the given budget constraints.
- Developed and automated TCP/DNS network pipeline for server-RSU and RSU-OBUs alerts, streamlining data flow.
- Used OpenStreetMap and JavaFX to develop a dashboard to track the vehicle's location and display alert messages.

## Technical Skills

- Languages:** Python, JavaScript/Typescript, Powershell, Java, Go, Scala, C/C++, R
- Technologies:** PowerBI, Tableau, Excel, Quicksight, MicroStrategy, AWS, Kubernetes, Replit, Git, Docker
- Frameworks:** Flask, Django, JavaFX, Spring, RESTful APIs, FastAPI, Spark, Kafka, Hadoop, MLFlow

## Projects

**Distributed Analytics Pipeline for Research Insights (Hadoop + AWS EMR) August 2025 – September 2025**

- Built a distributed analytics pipeline over 600+ research papers using Hadoop and AWS EMR, reducing data retrieval latency by **2.5×** and memory usage by **30%** through optimized preprocessing and multi-node inference.
- Designed Spark-based **clustering and anomaly detection** modules to identify topic patterns and emerging trends across datasets.
- Deployed a **Lambda-triggered analytics swarm** that autonomously synthesized results into actionable insights, demonstrating end-to-end BI automation from data ingestion to insight generation.

**AI-Driven College Recommendation & Insights Platform**

**May 2025 – July 2025**

- Developed a **data-backed recommendation system** achieving **95% matching accuracy** between student profiles and college outcomes using GPT-4 embeddings and behavioral metrics.
- Engineered **data pipelines** with Selenium and BeautifulSoup to extract and standardize structured datasets from 1,200+ college websites, expanding dataset coverage by **150%**.
- Integrated Flask backend with **PowerBI dashboards** to visualize user engagement, recommendation trends, and conversion funnels, supporting data-driven decision making.

**RAND-SLA: Randomized Bayesian Structure Learning for Causal Discovery September 2024 – November 2024**

- Designed a **Bayesian causal inference framework** using randomized conditioning to accelerate network structure learning, cutting computation time by **34%** while maintaining accuracy.
- Performed parameter tuning and sensitivity analysis on benchmark datasets using Python, Pandas, and scikit-learn to generate reproducible statistical insights.
- Applied results to **predictive analytics pipelines**, demonstrating practical applications of causal modeling for decision-support systems.

## Leadership & Activities

- Research Scholar, MICxN Lab:** Led 5+ workshops and reproduced 15+ research papers in the tenure of 1.5 years. Reviewed 50+ manuscripts of the junior research scholars.
- Clash of Codes:** Team ranked 1/20 in a competitive coding-based team competition organised by the university in season 1 (2023) and 2/20 in season 2 (2024); 4/80 in individual scores and 3rd in problems solved.
- Teaching Assistant & Peer Tutor, Ahmedabad University:** Assisted the professors in courses like AI, Embedded Systems, Computer Networks, and Predictive Analytics for Business (classes up to 130 students).