Aditya Hambire

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SUMMARY

• Final-year B.Tech student in Artificial Intelligence and Data Science at K. J. Somaiya Institute of Technology, with experience spanning causal machine learning, sales forecasting, and AI-enabled product development through academic research and self-directed projects.

• Interested in engineering management at the intersection of technology, product innovation, and business strategy, particularly in translating analytical insights into product decisions, evaluating operational trade-offs, and developing sustainable business models.

EDUCATION

B.Tech, Artificial Intelligence and Data Science *Aug 2023 – May 2027*
K. J. Somaiya Institute of Technology, University of Mumbai, Sion, Maharashtra *CGPA: 8.11/10*

Honors: Cybersecurity *Jun 2025 – Dec 2026*

RELEVANT COURSEWORK

Design Thinking and Ideation; Business Model Development and Prototyping; Strategic Management and IPR for Start-ups; Management Information System; AI in E Commerce; Business Intelligence and Data Visualization; AI Algorithms and Ethics; Machine Learning; Data Warehousing Mining and Visualization; Big Data Analytics

PROFESSIONAL EXPERIENCE

Def-Space Summer Intern | Bharat Space Education Research Centre (BSERC) *Jun - Aug 2026*

- Completed a six-week remote Def-Space Summer Internship Programme, exploring AI, data analytics, cybersecurity, robotics, drones, electric vehicles, and space technologies, including satellite imagery and object detection.

CAD Workshop Instructor | Akanksha Foundation *Jul - Oct, 2026*

- Conducted a 10-week Computer-Aided Design (CAD) workshop for underprivileged Class 8 students at a public school, teaching 2D and 3D design using Onshape through interactive live classroom sessions.

SIGNIFICANT PROJECTS

Cause2Cure | Causal AI for Drug Effectiveness Analysis *Jan 2026 - Present*

- Co-developed a clinical decision-support prototype using approximately 4,200 diabetes patient records to examine drug-effectiveness patterns across patient groups.
- Evaluated Random Forest and Gradient Boosting prediction with treatment-effect and counterfactual analysis; Gradient Boosting achieved 70.4% classification accuracy and an ROC-AUC of 0.730.
- Built an interactive dashboard and contributed to model evaluation, literature review, and manuscript preparation.

ProductSense | AI-Assisted Product Discovery and PRD Workflow *Independent Project, Oct 2026*

- Built a local AI-assisted prototype that turns customer feedback into grouped product opportunities and editable product requirements documents (PRDs), preserving source evidence and human approval.
- Implemented opportunity prioritization, PRD generation, review and revision, saved checkpoints, and Markdown/Word export using a stateful LLM workflow.

SupplySense | Sales Forecasting and Inventory Decision Simulation *Independent Project, Jun 2026*

- Reduced forecasting Mean Absolute Error (MAE) by 5.9%, from 0.874 to 0.823, on the same 28-day holdout while evaluating nine forecasting approaches.
- Achieved 89.8% prediction-interval coverage and developed inventory simulations incorporating forecast uncertainty, model comparisons, and configurable budget scenarios.
- Found that the model with the lowest forecasting error did not produce the lowest simulated inventory cost under the default assumptions.

LastMile | Hyperlocal Ride Aggregation Platform *Startup Project, Jan 2026 - Apr 2026*

- Identified high commuting costs between campus and Sion Railway Station and developed a shared-ride matching concept designed to improve affordability and reduce empty return journeys.
- Prototyped the platform and proposed a ₹5 convenience-fee model designed to allow drivers to retain their fares; the project was selected for incubation at K. J. Somaiya Institute of Technology.

RAG Document Chatbot | Agentic AI Saksham Internship *Jun 2025 - Aug 2025*

- Developed a document-based chatbot using Python, Streamlit, LangChain, ChromaDB, and an LLM API to generate responses grounded in user-uploaded PDFs.
- Integrated document processing, retrieval, and context-informed response generation; resolved ChromaDB file-path issues affecting embedding storage.

Stockify | Stock Analysis and Tracking Platform *Jun 2025 - Oct 2025*

- Developed a stock-analysis platform integrating market-data collection, preprocessing, and visualization to support analysis of historical stock-price trends.
- Implemented trend-analysis views to enable exploration of stock-price movements and changes over time.

Hotel Management System | Flask, HTML, CSS, JavaScript *Jan 2025 - Apr 2025*

- Developed a Flask-based web application to manage bookings, room allocation, guest records, and billing in a unified workflow.
- Designed front-end interfaces and integrated them with Flask application logic to support reservation processing and guest-information management.

Airline Reservation System | Java *Jun 2024 - Oct 2024*

- Developed a Java-based airline reservation system supporting flight searches, seat-availability checks, and booking confirmation.
- Implemented a structured reservation workflow connecting flight selection, availability verification, and booking confirmation.

AI & DS Department Website | K. J. Somaiya Institute of Technology *Jun 2025 - Present*

- Developing the official department website using HTML, CSS, JavaScript, and to consolidate departmental information, academic resources, and announcements.
- Developing navigation, page layouts, and content organization` to make departmental information easier for students to access.

PUBLICATIONS

- "Cause2Cure: Bridging Prediction and Counterfactual Reasoning for Drug Effectiveness Analysis Across Patient Groups." Accepted at ISRSD 2026; Springer Nature conference-proceedings publication in progress.

COMPUTER SKILLS

Programming Languages:	Python
Tools and Libraries:	Pandas, scikit-learn, Flask, Streamlit
Modeling and Analysis:	Causal Machine Learning, Sales Forecasting, Model Evaluation, Inventory Simulation, Data Analysis, Data Visualization
Engineering Applications:	AutoCAD, Onshape, MATLAB
General Applications:	Microsoft Office, Power BI, Lucidchart, LaTeX

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

- Forage Academy, Product Management Job Simulation *Nov 2026*
- TOEFL iBT: 100/120 (Speaking: 6/6) *Sep 2026*
- NPTEL, Design, Technology and Innovation - Elite Certification *Apr 2026*
- Agentic AI Saksham Project-Based Internship, Capabl *Sep 2025*
- Deloitte Data Analytics Job Simulation, Forage . *Jun 2025*
- Industrial Program on Startup and Entrepreneurship, 1stop *Feb 2024*

LEADERSHIP AND ACTIVITIES

- **Institutional Lead, National Entrepreneurship Challenge (NEC), E-Cell IIT Bombay:** Led campus participation by organizing student teams and coordinating weekly activities for entrepreneurship challenges.
- **Campus Ambassador, E-Cell IIT Bombay**: Promoted entrepreneurship programs and encouraged student participation in campus initiatives.
- **Student Coordinator Head, Green Club**: Organized a workshop and coordinated student participation in environmental awareness activities to promote sustainability.