PARTH SANDEEP RASTOGI

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EDUCATION

Indraprastha Institute of Information Technology   Delhi, India
Bachelor of Technology in Computer Science and Engineering   Oct 2022 - May 2026
- **GPA: 9.21/10** (through 6th semester)
- **Relevant Coursework:** Database Management Systems, Object-Oriented Programming, Computer Networks, Algorithms, Operating Systems, Software Development using Open Source, GPU Programming, Machine Learning, Artificial Intelligence, Natural Language Processing, Causal Inference (A+)

TECHNICAL SKILLS

Programming Languages: Python, R, C++, C, Java, JavaScript
Tools and Technologies: MySQL, PyTorch, Transformers, Pandas, NumPy, R Studio, NVIDIA CUDA, Git, Linux, Bash, Maven, Slurm, MySQL Workbench, LaTeX, AWS (DynamoDB, Lambda, S3, SAM, SQS, EC2), LangChain, FastAPI, Intellij

PROFESSIONAL EXPERIENCE

Data Science Intern, Laika AI — *Python, FastAPI, AWS (Lambda, S3, DynamoDB, EC2, SAM)*   May 2025 – Present
Supervisor: Mr. Divyanshu Chauhan
- Architected scalable RESTful APIs and backend microservices for an agentic chatbot platform using modular design patterns (Factory, Strategy); Engineered end-to-end chat workflows with full customizability, deployed on EC2 to support 5K+ real-time user interactions/month.
- Built and deployed 10+ production-grade microservices from scratch—free of bloated frameworks—for crypto analytics, transaction processing, and visualization workflows; leveraged AWS SAM for modular deployment.

Machine Learning Intern, Heydo Tech — *Python, PyTorch, Time Series Forecasting*   Jan 2025 – Apr 2025
Supervisor: Mr. Akshmit Dewan
- Built end-to-end ML pipeline for Apni Mandi project, modeling weekly sales trends across 10,000+ SKUs using 3+ years of historical data spanning multiple retail locations.
- Optimized LSTM, GRU, and Transformer architectures for multivariate forecasting; attained mean absolute error (MAE) of 4.5 on weekly predictions, outperforming baseline models by 25%.
- Implemented advanced feature engineering techniques, including seasonality decomposition and rolling statistics, across 3M+ data points, improving model performance and signal quality by 30%.

PROJECTS

ERP System Modules — *AWS (SAM, Lambda, DynamoDB), GraphQL*   Jan 2025 – May 2025
- Designed a **microservices-based ERP system** for Aero Armour using AWS SAM and a single-table DynamoDB schema, enabling low-latency data access and scalable operations across 5+ business modules.
- Integrated **Shopify APIs** via GraphQL to automate production workflows and returns management, reducing manual overhead by 60% and enabling real-time analytics on 50+ product sales records.

Deception Detection in Diplomacy — *Python, NLTK, PyTorch, Transformers*   Mar 2025 - Apr 2025
- Proposed HiS-Attention, a transformer-based **multimodal fusion model** integrating BERT embeddings, structured game-state features, and ten-turn context; achieved a 57.38% macro F1 score, surpassing the previous benchmark by 3.2%.
- Created LieDetectorGAT, an edge-aware **graph-attention network** enhanced with BERT embeddings and deception-lexicon features; established new benchmark with 58.0% Macro F1 (+0.6 pts improvement) and 26.6% Lie F1 on Diplomacy deception dataset.

Shell-Scheduler — *C Language, Linux, Shell Scripting*   Sep 2023 - Oct 2023
- Designed a Linux shell with prompt display, command execution, and command history tracking along with a scheduler to schedule those processes.
- Implemented **IPC mechanisms** including signal handling, piping, and background process management
- Developed **Multilevel Queue (MLQ)** and Round Robin schedulers that increased efficiency of shell by 30%

AWARDS AND ACHIEVEMENTS

- Secured top 0.5% rank in KVPY Fellowship 2020 and ranked in top 1% in JEE Mains among 1M+ candidates nationwide
- Achieved Dean's List Award for academic years 2023-24 and 2024-25 for outstanding academic performance.
- Selected as a finalist in HackJNU 3.0 2024, a hackathon focused on UN Sustainable Development Goals.
- Solved 850+ algorithmic problems across LeetCode and Codeforces, achieving Specialist rank (Max. 1400) on Codeforces

LEADERSHIP AND RESPONSIBILITIES

- **Software Product Design Mentor**, Center for Intelligent Product Development—Mentored student entrepreneurs in product development strategies and technical implementation approaches.