Supriya Maji

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Education

Indian Institute of Technology, Patna   **Jul 2023 – June 2025**
*Master of Technology in Artificial Intelligence (**CGPA: 7.89**)*

Heritage Institute of Technology, Kolkata   **Jun 2017 – Aug 2021**
*Bachelor of Technology in Electronics & Communication Engineering (**CGPA: 8.35**)*

Shyampur High School, Shyampur   **Jan 2014 – Mar 2015**
*Higher Secondary (12th), West Bengal Council of Higher Secondary Education (**Percentage: 91.8%**)*

Gurepole High School, Gurepole   **Jan 2012 – Feb 2013**
*Secondary (10th), West Bengal Board of Secondary Education (**Percentage: 80.0%**)*

Technical Skills

Languages and Scripting: C/C++, Python, SQL, JavaScript
Web Skills: HTML, CSS, Node.js, React.js
Libraries/Frameworks: Pandas, NumPy, PyTorch, scikit-learn, XGBoost, OpenCV, Transformers
Database: MySQL, SQLite, PostgreSQL
Data Visualization: Matplotlib, Excel
Tools & OS: Git, GitHub, Jupyter Notebook, Google Colab, Overleaf, MATLAB, Linux, Windows, macOS
CI/CD & Config Management: Git, GitLab, GitHub
Key Courses: Data Structures and Algorithms, DBMS, Artificial Intelligence, Machine Learning, Deep Learning, NLP and Statistics

Experience

Cerebry   **2021 - 2023**
AI-Software Developer   *Faridabad, Haryana*

– Engineered an AI-driven adaptive learning platform, integrating NLP-based dynamic question generation, syllabus management, and predictive analytics, improving personalized student learning outcomes by **35%**.
– Designed and deployed scalable REST APIs using Django, enhancing adaptive learning workflows, real-time student progress tracking, and teacher management modules, reducing response latency by **40%**.
– Optimized PostgreSQL database, implementing indexing and query optimization strategies, improving data retrieval speed by **50%** and ensuring seamless platform scalability.
– Developed and fine-tuned AI models leveraging OpenAI APIs, automating prompt and question generation, cutting manual effort by **50%** and enhancing content diversity.
– Implemented caching mechanisms and database query optimizations, reducing API response times by **45%** and improving platform responsiveness under high traffic loads.
– Collaborated closely with frontend developers to ensure seamless API integration, conducted rigorous code reviews and contributed to extensive technical documentation, improving development efficiency by **25%**.

Projects

Therapist and Child Detection and Tracking
– Designed a system using ML and Computer Vision to track children and therapists, achieving **95% accuracy** in behavior analysis.
– Optimized person detection in long-duration videos (over 5 hours), **reducing processing time by 30%**.
– Ensured **90% tracking consistency** by handling re-identification and managing unique IDs post-occlusion.
– **Tech Stack**: YOLOv8, Python, OpenCV, Deep Learning, Video Processing, Object Detection, and Tracking.

Dual-Branch Network for Cattle Image Quality Assessment
– Streamlined a Dual-Branch Network to evaluate the quality of cattle images using advanced deep learning architectures, ensuring accurate quality assessment for diverse datasets and conditions.
– Enhanced image feature extraction and quality scoring using a refined multi-scale vision model.
– Implemented Local Implicit Quantized Embedding (LIQE) to address diverse backgrounds and variations.
– **Tech Stack**: Python, Swin Transformers, LIQE, Deep Learning, and Image Processing.

Accomplishments

– Received **Employee of The Month** 9 times.
– Achieved recognition as the youngest **Team Lead**, demonstrating exceptional leadership and technical expertise at an early stage in my career.
– Achieved a commendable **percentile of 96.51** in **GATE (CS/IT)** in 2023.
– Solved **300+** DSA problems on **LeetCode** and **500+** on **GeeksforGeeks**.