Pushkar Ghosh

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Education

University of Engineering and Management — Kolkata, West Bengal
Bachelor of Technology in Computer Science Engineering; ***CGPA: 9.15*** — *Aug. 2022 – Present*

Garden High School — Kolkata, West Bengal
CISCE (12th) Science; ***Percentage: 92%*** — *April 2021 – March 2022*

Garden High School — Kolkata, West Bengal
CISCE (10th) Science; ***Percentage: 93.8%*** — *April 2019 – March 2020*

Experience

Coal India Limited — Kolkata, West Bengal
Project Intern, System Department — *Dec. 2025 – Present*

- Spearheaded the development of 'Coal Quality Prediction System', a Flask-based ML web app incorporating **16 predictive models** trained on **5,000+ records** to forecast Coal Grade and GCV, targeting a **15% improvement** in reporting accuracy.
- Engineered 'Policy Neural Engine', a local RAG-based chatbot using **Streamlit, LangChain, and Ollama (Phi-3.5)**; reduced retrieval time by **40%** by integrating hybrid OCR (Tesseract) to index **200+ legacy PDF pages**.

Mekhline Infotech Pvt. Ltd. — Kolkata, West Bengal
Cloud Technical Analyst Intern — *June 2025 – Sept. 2025*

- Optimized cloud infrastructure deployment strategies on Google Cloud Platform (GCP), reducing server provisioning time by **20%** through the implementation of automated Python scripts and resource allocation analysis.
- Resolved **10+** critical configuration incidents during the internship tenure, collaborating with cross-functional teams to maintain system stability and ensure **99% uptime** for development servers.

Projects

Amazon Music Review Sentiment Analyzer | *Python, NLP, Scikit-learn, GCP*

- Architected an end-to-end sentiment analysis pipeline to process **5,000+ product reviews**, utilizing Naive Bayes and Logistic Regression to achieve **85% classification accuracy**.
- Deployed a Linux Virtual Machine on **Google Cloud Platform (GCP)** with Cron jobs to automate daily data extraction and processing, eliminating **5+ hours/week** of manual data entry tasks.
- Visualized customer trend insights using Matplotlib, enabling data-driven product decisions based on real-time sentiment polarity.

Facial Recognition System | *Python, OpenCV, dlib*

- Built an offline facial recognition system capable of identifying individuals from a **100-image dataset** with **92% accuracy** under varying lighting conditions.
- Optimized face encoding algorithms to achieve a recognition latency of **under 250ms**, suitable for real-time access control applications.
- Implemented strict privacy protocols ensuring **100% offline processing**, removing the need for external API calls or cloud storage.

Technical Skills

Languages: Java, C, Python, HTML/CSS, SQL
Frameworks/Libraries: Flask, Streamlit, LangChain, Scikit-learn, OpenCV, Pandas, NumPy
Developer Tools: Visual Studio Code, Google Cloud Platform (GCP), Git/GitHub

Achievements

Scientific Innovation: Secured 2nd Runner-up in District-Level Science Model Competition (2023).
Publication: Published review paper "Application of AI in the Automobile Industry" in the book "Technology of Tomorrow".
Tech Solutions: Achieved 2nd Runner-up in Inter-College Innovative Project Competition (2022).
Academics: Awarded Academic Excellence Rank Card in 1st,2nd and 3rd year (Top 10% of students).