Shivam Singh

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Professional Summary

Accomplished final-year Computer Science student specializing in Artificial Intelligence and Machine Learning. Spearheaded the development of end-to-end NLP and mobile application projects, utilizing Python, Kotlin, and advanced Transformer architectures. Achieved high accuracy in text classification models and engineered real-time solutions for practical, data-driven problems.

Education

VIT Bhopal University, Bhopal, B.Tech in Computer Science and Engineering with Specialization in Artificial Intelligence and Machine Learning — Sept 2022 – ongoing
- CGPA: 8.48/10

DAV Calderys Public School, Katni, Madhya Pradesh, 12th standard — June 2022
- Percentage: 83.8%

DAV ACC Public School, Katni, Madhya Pradesh, 10th standard — July 2020
- Percentage: 86.6%

Technical Skills

- Languages: Python, Kotlin, SQL
- Frameworks: Jetpack Compose ,Scikit-learn ,Pandas, Tensorflow

Languages: English, Hindi

Projects

OTP Router – Auto OTP Forwarder Android App — Nov 2024
- Developed an Android application to automate OTP forwarding from SMS to email, achieving real-time delivery with under 2s latency.
- Devised background processing with BroadcastReceivers and Kotlin Coroutines for reliable, asynchronous OTP handling.
- Designed a modern user interface with Jetpack Compose and validated performance across 10+ devices with 100% parsing accuracy.
- Evaluated performance under high traffic (100+ OTPs/hour) to confirm stability without crashes or memory leaks.
- Integrated structured logging to simplify debugging and enable performance monitoring during testing.

Text Classification of Articles in Bhojpuri — Jun 2024 – Sep 2024
- Collected and systemized 5,100+ Bhojpuri news articles through custom web scraping to create datasets for a low-resource language.
- Produced raw, balanced, and augmented datasets (expanded to 9,156 samples) to improve model robustness.
- Spearheaded fine-tuning of LLaMA 3.1 (8B) and mBERT, achieving 93% accuracy on balanced data with mBERT.
- Assessed CNN, BiLSTM, BERT, and GPT models, and tested cross-input classification for generalization.
- Implemented data augmentation methods (synonym replacement, back-translation) to address data scarcity and reduce overfitting.
- Conducted error analysis to identify model weaknesses on code-mixed Bhojpuri-Hindi text.
- Authored results with comparative metrics, highlighting challenges of under-resourced NLP tasks.
- Proposed improvements for future Bhojpuri NLP research in a structured, presented report.

Courses and Achievements

- Completed "Applied Machine Learning in Python" (Coursera), mastering advanced techniques in regression, classification, clustering, and text analysis using Scikit-learn.
- Attained the AWS Cloud Foundations Badge, demonstrating foundational knowledge of cloud concepts, services, security, architecture, and pricing.

Hobbies & Extracurricular Activities

- Co-ordinated student logistics and scheduling as a volunteer for the TCS campus placement drive, ensuring a smooth process for hundreds of candidates.
- Strengthened problem-solving skills and mastered Data Structures and Algorithms by solving over 100 challenges on platforms like LeetCode and HackerRank.