Vanshika Sachdeva

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/Vanshika LinkedIn

Education

Senior Secondary Education	Dalimss Sunbeam School(PCM)
High School (2011-2023)	St.John's Marhaulli (CISCE)

Experience

Summer Student| The Indian Vidyarthi, *India* June'24

- Engaged in global issue workshops, wrote on urban water management, focused on global issues, innovative business strategies, and sustainable practices.

Science Exhibition Winner

- Participated in annual school science exhibitions with consistently well-received projects.Awarded **First Prize** for presenting the most innovative and impactful project among all participants.Demonstrated creativity, critical thinking, and strong presentation skills throughout the events.

Projects

Quantum Temporal Lattice Theory (QTL), IJSAT

- Authored a research paper in a peer reviewed international journal, explored theoretical concepts of localized time manipulation through quantum mechanics, string theory, and holographic encoding.The study proposed the concept of creating time loops by altering encoded space time data.

Spam Email Classifier

- Description: Build a simple spam detector for emails using Python. Use Scikit-learn for ML (e.g., Naive Bayes), regex for extracting features (like suspicious links or phrases), and accuracy/loss functions for model evaluation.

Simple Sentiment Analyzer

- Classify sentences as positive/negative using basic ML (e.g., logistic regression). Use regex to preprocess text (remove punctuation, find emoticons), and show loss/accuracy plots.

File Name Pattern Finder

- Built a tool that scans directories and uses regex to find files matching certain patterns (e.g., dates, versions). Optionally, classify files as "log", "data", etc., using a simple trained model.

Handwritten Digit Recognizer (MNIST)

- Used the classic MNIST dataset with a simple neural network (Keras/Scikit-learn). Logged loss and accuracy during training, and visualized misclassified digits.

Basic Log File Error Detector

- Used regex to find error patterns in log files, and use clustering (unsupervised ML) to group similar errors. Visualized cluster loss (e.g., inertia in KMeans).

Regex-based Data Extractor with ML Post-Processing

- Used regex to extract phone numbers/emails from text, then trained a simple ML model to classify if the text is a "contact info snippet" or not. Calculated and plotted loss during training.

Achievements

- Received a 90% scholarship for academic excellence at PW(2023).
- Contributed in a research paper on **Quantum Temporal Lattice** in IJSAT (Feb 2025).
- Participated in spell bees at national level.
- Won 7000 INR cash prize in a hackathon and secured **second position in a CLI-based automation challenge** for building the CMD Error Detector and Fixer tool.
- Invited to India's Got Talent at national Level.
- Secured second position in Nav Sadhana Singing Competition among thousands of competitors.

Volunteering

- Raised donations for visually and hearing-impaired children.

Skills

Languages & Libraries: Python, Scikit-learn, Keras, Regex
Machine Learning: Logistic Regression, Naive Bayes, Sentiment Analysis, Clustering
Tools & Tech: CMD Automation, BIOS Debugging, Hardware Troubleshooting, Model Evaluation
Soft Skills: Research Writing, Public Speaking, Team Collaboration, Problem Solving