

# ARPIT LAL

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## SUMMARY

Final-year Electrical Engineering undergraduate with hands-on experience in **Backend Development**, **Machine Learning**, **NLP**, and **Data Analysis**. Built and deployed **end-to-end ML pipelines** for clustering, recommendation, and prediction problems. Proficient in **DSA** and backend development using **Flask and Django**. Seeking **ML Engineer / SDE-1** roles in IT companies.

## TECHNICAL SKILLS

<b>Programming Languages:</b>	Python, C, C++
<b>Backend:</b>	Flask, Django
<b>Machine Learning:</b>	Scikit-learn, TensorFlow, Keras, NLP, Clustering
<b>Data Analysis/visualization:</b>	Pandas, NumPy, Matplotlib, Seaborn
<b>Databases:</b>	MySQL
<b>DevOps Tools:</b>	Git, GitHub, Docker, GitHub Actions
<b>Courses:</b>	DSA, OOPs, Computer Networks
<b>Embedded and Electrical:</b>	Arduino, Raspberry Pi, MATLAB, EagleCAD

## PROJECTS

### E-Tongue

*Summer Internship, NIT Patna*

*EagleCAD, Matlab, LabView, Python, Machine Learning, Deep Learning*

- Designed and worked on an **E-Tongue** system integrating hardware (sensors, circuitry) and software for data acquisition and analysis.
- Applied **ML/DL techniques** for pattern recognition and classification of sensor responses.

### Stock Prediction System

[Stock Prediction System](#) | [GitHub](#)

*yfinance, Pandas, datetime, matplotlib, sklearn, keras*

- Built a stock price prediction pipeline using **historical market data** and ML/DL models.
- Implemented data fetching, preprocessing, model training, and visualization of predicted vs actual trends.

### Movie Recommendation System

[Movie Recommendation System](#) | [GitHub](#)

*Numpy, Pandas, Matplotlib, AST, NLTK, sklearn*

- Developed a **movie recommender system** leveraging NLP and similarity-based approaches.
- Processed movie metadata and plots to generate personalized recommendations for users.

### Fake News Detector

[Fake News Detector](#) | [GitHub](#)

*Numpy, Pandas, re, NLTK, PorterStemmer, TfidfVectorizer, LogisticRegression, accuracy score*

- Implemented a **text classification** pipeline to detect fake news articles.
- Used TF-IDF features and **Logistic Regression** to achieve robust performance, evaluated via accuracy metrics.

### Customer Segmentation

[Customer Segmentation](#) | [GitHub](#)

*Numpy, Pandas, Matplotlib, Seaborn, sklearn, Scipy, Silhouette score*

- Performed **unsupervised learning** for customer segmentation using clustering algorithms.
- Evaluated clustering quality using **Silhouette score**, and visualized segments for business insights.

### CI/CD Pipeline

[CI/CD Pipeline](#) | [GitHub](#)

*Github Actions, Docker, GitLab*

- Designed a **CI/CD pipeline** to automate build, test, and deployment workflows.
- Integrated Docker and GitHub Actions/GitLab for streamlined DevOps processes.

## ACHIEVEMENTS

- **IISc, Bangalore:** Review paper on *White Dwarf Binary System and Binary Pulsars* got selected.
- **IIT Roorkee:** Participated in IIT Roorkee Techfest Cognizance 2024 for events: *RC Plane, Robo Soccer, RC Car*.
- **Smart India Hackathon:** Cleared the first round of SIH at college level.
- **MIT WPU, Pune:** Represented **NSS YP SLIET** at MIT WPU Pune for the 13th BCS assembly held in Jan 2024.

## EDUCATION

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### B.E. Electrical Engineering

Sant Longowal Institute of Engineering and Technology (SLIET)  
CGPA: **7.5**

Longowal, Punjab  
*6th Semester*

### XII (CBSE)

Holy Mission Senior Secondary School  
Percentage: **75.4%**

Patna, Bihar  
*March 2021*

### X (CBSE)

Loyola High School  
Percentage: **85.6%**

Patna, Bihar  
*March 2019*

## POSITIONS OF RESPONSIBILITY

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### Endeavour (Robotics Team): *Convener*

- Led and coordinated robotics activities, competitions, and team projects.

### Sur & Rhythm (Music Band): *Co-ordinator*

- Organized and managed band practices and performances for institute events.

### Youth Parliament (NSS): *Ex-Co-coordinator*

- Coordinated Youth Parliament activities under NSS, promoting student engagement and public speaking.