# PIYUSH GUPTA

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## WORK EXPERIENCE

# Centre for Railway Information Systems | Software Developer Intern (JULY 2023 – Present) | New Delhi, IN

- (JUL 1 2025 Present) | New Denn, IN
  - Spearheaded the design and development of the Integrated Coaching Management System, optimizing real-time train monitoring and resource allocation.
  - Revolutionized status management with a responsive Flutter platform, enhancing decision-making and resource use.
  - Architected the seamless integration of Oracle backend services, boosting railway data reliability and accessibility for improved efficiency.
  - Drove data-driven project elevating train monitoring, enhancing service quality and resource allocation for a streamlined railway experience.

#### SHUNIYAVIGYAN | Flutter Developer Intern

#### (JAN 2022 - MAY 2022) | New Delhi, IN

- . Designed, developed, and maintained a mobile application using Flutter, seamlessly integrating AWS backend services for smooth functionality.
- Led the development of "BHOLU," an innovative educational Flutter app for bilingual programming in Hindi and English.
- Innovatively introduced a user-centric feature facilitating seamless bilingual coding via a terminal, enhancing accessibility and inclusivity.
- Integrated comprehensive course modules, interactive quizzes, a daily leaderboard, and a discussion panel for queries, amplifying user engagement and fostering collaborative learning experiences.

#### **SKILLS**

Languages: C/C++, Python, Java, Dart, Kotlin, JavaScript, HTML, CSS, SQL

Tools and Platforms: Android Studio, Figma, Canva, and VS Code.

Libraries & Frameworks: Flutter, TensorFlow, Keras, Flask, NumPy, Pandas, Seaborn, Matplotlib, OpenCV

Databases: Firebase, MySQL, and MongoDB.

Other Technical Skills: Machine Learning, Deep Learning, Android Development, Git, Data Analytics, Data Science, Presentations Extra-Curricular & Soft Skills: Problem Solving, Excellent Communication, Analytical Skills, Teamwork, Leadership, Agile, Adaptable

## **PROJECTS**

#### CREDIT CARD FRAUD DETECTION USING FEDERATED LEARNING

#### Deep Learning | Federated Learning | MLP | TensorFlow | Python

- Engineered a Federated Multilayer Perceptron Neural Network (FedMLPNN) leveraging TensorFlow for 97.34% credit card fraud detection accuracy.
- Achieved remarkable recall and precision rates of 97.42% and 97.28%, minimizing false positives and maximizing accurate identification.
- Demonstrated an impressive AUC score of 99.63%, underscoring FedMLPNN's robustness and discrimination capability.

## BOOKMYPARKINGLOT- A PARKING MANAGEMENT APPLICATION

## Flutter | Java (Spring Boot) | MongoDB | NodeJS | AWS

- Created an intuitive user interface to display real-time data on vacant parking spaces, which helps users save time and avoid the hassle of searching for
  parking spots and to address the challenge of finding parking spaces during peak hours.
- Implemented a two-way system for the app that includes both user and admin functionality, allowing users to view vacant parking spots and parking owners to manage and monitor their spaces.
- Demonstrated strong problem-solving skills and attention to detail in ensuring accurate and up-to-date data on parking availability.

## ASTROCLASSIFY: AN ASTRONOMICAL SOURCE CLASSIFICATION SYSTEM

## $Machine\ Learning\ |\ TensorFlow\ |\ Python$

- Utilized ExtraTreesClassifier to perform robust classification of astronomical sources based on photometric, spectroscopic, and mathematically derived features across 14 pre-defined classes.
- Enhances understanding of celestial objects' properties, aiding advanced research and expanding the frontiers of astronomical exploration.
- Achieved an initial Base Model Accuracy of 83.7%, further elevated to an impressive 91.9% through refinement and optimization.

## **EDUCATION**

## BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, NEW DELHI, IN (August 2020- July 2024)

Bachelor of Technology in Computer Science and Engineering

CGPA: 9.1/10

## **ACHIEVEMENTS**

- AWS AI and ML Scholarship Recipient (2023): Awarded USD 4000 scholarship; Top 500 globally in advanced cohort.
- SMART INDIA HACKATHON (2022): Grand Finalist
- Flutter Session Speaker (2021-2022): Presented sessions twice at Google Developer Student Club BVP
- Academic Excellence: 1st Rank, First Semester (All Departments). 8th Rank, First Year (Computer Science Department).
- BVEST (2021), Beat the Base Return: Secured 1st Position.

## **CERTIFICATIONS AND RECOGNITION**

AWS AI with Python Nanodegree (AWS in Collaboration with Udacity) | STMicroelectronics: Embedded AI System | Cisco: Industrial Visit | Ducat-Machine Learning Training | Udemy-Public Speaking: A tactical approach | Google QwikLabs-Google Cloud Engineering Track | Google QwikLabs -Data Science and Machine Learning Track | Goldman Sachs: Engineering Virtual Program