Vipulesh

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Programming Languages: Python, C++

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 Avid11
 Vipulesh Tiwari

EDUCATION

- **International Institute of Information Technology, Naya Raipur** December 2021 - July 2025
  B.Tech in Electronics and Communication Engineering **CGPA: 8.98/10**
  Relevant Coursework: Statistics, Machine Learning Applications, Optimisation Techniques, Reinforcement Learning
- **Saint John's School, Jaunpur** 2020
  Senior Secondary, ISC Board, Uttar Pradesh Percentage: 93%

PROFESSIONAL EXPERIENCE

- **Vumonic Datalabs** March 2024 - April 2024
  AI/ML Intern
  - **PII Masking:** Using token classification, fine-tuned the distilledBERT model on custom PII data masking PIIs from clients' emails. Increased the **accuracy to over 90%**. Decreased the overall incurred cost.
  - **Product Mapping:** Spearheaded the labeling of raw data for product categorization model using an LLM-based approach, improved accuracy **from 65% to over 85%** and streamlined the entire process.
  - **Custom Classification Model:** Created a custom model based on BiLSTM for classifying around 66 categories from the data collected from various e-commerce platforms. Obtained **97% accuracy**.
- **Samsung India** April 2023 - January 2024
  R&D Intern
  - **Selective Denoising:** Selectively removed the background noise from an audio signal using a CNN + LSTM model within the latency constraint of 20 ms. Obtained multiclass **classification accuracy over 90%.**
- **Indian Institute of Technology, Jodhpur** May 2023 - July 2023
  Research Intern Jodhpur, Rajasthan
  - **Automatic modulation Classification algorithm for NOMA signals:** Developed a custom Spatial Transformer Network (STN) to transform faded constellation diagrams for NOMA signals classification; experimented with Autoencoders and GANs, achieving a 25% improvement in classification accuracy

PROJECTS

- **Driver Profiling and Identification based on Time Series Analysis**
  A DL-based model to deal with the security issues regarding car break-ins and theft.
  - **Skills**: Deep Learning, RNN, Feature Selection, Transfer Learning
  - **Tools & technologies**: LSTM, Neural Networks, TensorFlow, Keras, MRMR
  - Achieved a classification accuracy of **94%** for 10 different driver classes. Published in Springer's International Journal of Intelligent Transportation Systems Research. Paper link - Driver Profiling
- **iHELM**
  An IoT-Based Smart Helmet for Real-time Motorbike Accident Detection and Emergency Healthcare Services
  - **Skills**: IoT, Machine Learning, Decision Trees, Classification
  - **Tools & technologies**: ThingSpeak cloud, Arduino UNO, Python, pywhatkit API
  - Predicted severe accidents with **90%** accuracy with a delay of less than 15 minutes. Published in 2022 OITS International Conference on Information Technology (OCIT). Paper link- iHELM

SKILLS

Languages: Python, C++, Java, SQL, C
Frameworks: PyTorch, Pandas, Scikit-learn, TensorFlow, Keras, Flask, Streamlit, HuggingFace, FastAPI
Soft Skills: Public Speaking, Problem Solving, Communication, Collaboration, Statistical Modeling
Areas of Interest: Natural Language Processing, Deep Learning, Machine Learning, Computer Vision, GenAI, LLMs

ACHIEVEMENTS AND POSITIONS OF RESPONSIBILITY

- **Selected for Amazon ML Summer School 2024** July 2024
- **Student Coordinator,** SCInTFIC, IIIT NR's science and technology expo. November 2022 - January 2023
- **Secretary,** Take da Bait, The debating society of IIIT NR. June 2022 - January 2023

CERTIFICATIONS

Machine Learning Specialization, A three-course specialization by Stanford University and DeepLearning.AI on Coursera. **Certificate Link**
Deep Learning with PyTorch: Image Segmentation: An online project authorized by Coursera Project Network and offered through Coursera. **Certificate Link**