

Suwesh Prasad Sah

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EDUCATION

National Institute of Technology Rourkela, India Bachelor of Technology in Computer Science and Engineering	Dec 2020 - Jun 2024 GPA: 7.80/10.0
St. Xavier's English High School, India Intermediate in Science and Maths	Jun 2018 - Sep 2020 Percentage: 81/100
Marigold English Boarding School, Nepal Matriculation	2018 GPA: 3.60/4.0

EXPERIENCE

Hero Housing Finance Graduate Engineer Trainee	Jun 2024 - Present Gurugram, Haryana, India
<ul style="list-style-type: none">Designed a LLM-based Retrieval-Augmented Generation (RAG) application integrating FAQ documents, user manuals and video transcripts into an intelligent chatbot deployed on EC2 and accessible from Salesforce Org with a custom AES-encrypted token system for stateless authentication, improving self-service support and reducing support tickets.Engineered a custom semantic video retrieval system for the above chatbot application, using cosine similarity on timestamped video transcripts (created using Automatic Speech Recognition) and the LLM's response to generate dynamic short video links as references, boosting user adoption and learning efficiency.Salesforce Org testing automation using programmatic DML/CRUD operations on SObjects executed through Python and the simple-salesforce library.BRD analysis and application change implementation management with product ownership responsibilities.	
TVS Motor Company Data Engineer, Internship	May 2023 - July 2023 Bangalore, Karnataka, India
<ul style="list-style-type: none">Designed and developed scalable ETL (Extract, Transform, Load) pipelines on Microsoft Azure using Azure Data Factory, Data Lake, Delta Tables, and Azure SQL Server; integrated data from SAP HANA and SAP client APIs.Automated repetitive manual data engineering tasks by building reusable ETL frameworks in Databricks using Python and PySpark, improving team efficiency and reducing processing time.	
Wobblrr IT Services Network Engineer, Internship	Jul 2022 - Sep 2022 Delhi, India
<ul style="list-style-type: none">Simulated and developed VLAN blueprints in Cisco Packet Tracer which were later used for on-site implementation.	

RESEARCH AND PROJECTS

Parallel Perception Network Research Publication (view paper)	2024 - 2024 huggingface/PPN
<ul style="list-style-type: none">Designed and implemented Parallel Perception Network (PPN): two independent neural modules (segmentation + reconstruction) executing concurrently on separate accelerators (hardware parallelism) to meet real-time demands of high-speed autonomous racing.Ingests raw 3D LiDAR point clouds, projects them to Bird's Eye View, and processes spatial + temporal features in parallel, achieving 2x inference speedup over sequential pipelines.	
Multi-core Sentiment Engine Python, NLP	2023 - 2023 github/SentimentEngine
<ul style="list-style-type: none">Developed a scalable, rule-based ETL text analysis algorithm with CPU-based multiprocessing to handle multiple text files in parallel across logical cores, significantly reducing text processing time on CPU only systems.Extracted web data using requests, parsed HTML with BeautifulSoup, and preprocessed text with NLTK tokenizers to compute sentiment scores including polarity and positivity/negativity.	
Parking Forecasting System Python, ML, IoT, Time Series Prediction	2023 - 2023 github/PFS
<ul style="list-style-type: none">Implemented an IoT-based smart parking system with data collection on the cloud.Using sci-kit learn, two models are used to individually predict the probability of slot availability. When compared, the Multi-Layer Perceptron gives slots with more probability of availability compared to the Random Forest Classifier.	

TECHNICAL SKILLS

Programming Languages & Frameworks: Python, C/C++, MySQL, PostgreSQL; PySpark, flask

MLOps: PyTorch, Transformers, vLLM, ASR, NLP, CV, Hugging Face, High-Performance Computing

Cloud & DevOps: Microsoft Azure, AWS, git, CI/CD, Automation

Operating Systems: Windows, Ubuntu, RHEL, MacOS

Programming Concepts: Data Structures, Algorithms, DBMS, OOPs

Languages: English, Hindi, Nepali, Maithili

CERTIFICATIONS

Research Paper Presenter ↗	12th IEEE International Conference on Intelligence System and Embedded Design	2024
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RELEVANT COURSEWORK

Computer Science: Deep Learning, Machine Learning, Cloud Computing, Software Engineering, Database Management System, Computer Organization and Architecture, Data Structures and Algorithm, Distributed Systems, Object Oriented Programming, Operating Systems, Computer Networks