Suwesh Prasad Sah

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Education

National Institute of Technology Rourkela, India — Dec 2020 - Jun 2024
Bachelor of Technology in Computer Science and Engineering — GPA: 7.80/10.0

St. Xavier's English High School, India — Jun 2018 - Sep 2020
Intermediate in Science and Maths — Percentage: 81/100

Marigold English Boarding School, Nepal — 2018
Matriculation — GPA: 3.60/4.0

Experience

Hero Housing Finance — Jun 2024 - Present
Graduate Engineer Trainee — Gurugram, Haryana, India

- Designed and deployed an LLM-based Retrieval-Augmented Generation (RAG) pipeline integrating FAQ documents, user manuals and video transcripts into an intelligent chatbot within Salesforce Org, improving self-service support and reducing support ticket volume.
- Engineered a custom semantic video retrieval system for the above chatbot, using cosine similarity on timestamped video transcripts (created using Automatic Speech Recognition) to generate dynamic short video links as references, boosting user adoption and learning efficiency.
- Software testing and implementation of test automation workflows for desktop and mobile applications.
- BRD analysis and application change implementation management with product ownership responsibilities.

TVS Motor Company — May 2023 - July 2023
Data Engineer, Internship — Bangalore, Karnataka, India

- 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 — Jul 2022 - Sep 2022
Network Engineer, Internship — Delhi, India

- Simulated and developed VLAN blueprints in Cisco Packet Tracer which were later used for on-site implementation.

Research and Projects

Parallel Perception Network — 2024 - 2024
Research Publication (view paper) — huggingface/PPN

- 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 2× inference speedup over sequential pipelines.

Multi-core Sentiment Engine — 2023 - 2023
Python, NLP — github/SentimentEngine

- 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 — 2023 - 2023
Python, ML, IoT, Time Series Prediction — github/PFS

- 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; PySpark, PyTorch, Transformers
Cloud & DevOps: Microsoft Azure, AWS, CI/CD, Automation
Operating Systems: Windows, Ubuntu, RHEL, MacOS
Other Programs: Adobe Lightroom, Adobe Photoshop
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

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