DIWAS BHATTARAI

225-907-8545 | diwas.bhattaraiii@gmail.com | linkedin.com/in/diwasbhattarai/

SUMMARY

Machine Learning Engineer with 3 years of experience specializing in model development and deployment. Skilled in data acquisition and preprocessing. Committed to improving system functionality using advanced machine learning algorithms.

EDUCATION

Ph.D. in Computer Science   *2023*
Louisiana State University
- Applied machine learning techniques, including neural networks (in PyTorch) and tree-based models (in scikit-learn), for silicate melts viscosity modeling, attaining better RMSE on larger datasets than subset-optimized physical models while facilitating extensive parameter integration.
- Developed a full-stack web application to assess model performance with Angular, D3, Flask, and MongoDB.

Bachelor in Computer Science (Mathematics minor)   *2013*
Southeastern Louisiana University

EXPERIENCE

Machine Learning Engineer   *Fall 2022 - Present*
Spores | Denver, CO
- Research and build audio AI components for a new music remixing platform with 4000+ remixes in two weeks.
- Worked on data collection, labeling, pre-processing, feature extraction, and training machine learning models.

Application Developer Intern   *Summer 2018 - Fall 2019*
T. Baker Smith | Baton Rouge, LA
- Developed real-time big-data visualization components to monitor IoT data from 200 pump stations.
- Set up a data streaming pipeline and integrated anomaly detection components.
- Implemented a cross-platform tablet application and collaborated on making hardware prototypes.

Software Developer Analyst   *Spring 2013 - Fall 2015*
Amedisys Inc. | Baton Rouge, LA
- Contributed to a public-facing web application through the development of new features.
- Evaluated available mobile technologies, leading to the development of cross-platform mobile applications.
- Developed real-time code analysis Visual Studio plugins to improve software development efficiency.

Undergraduate Research   *Fall 2011 - Spring 2012*
Southeastern Louisiana University | Hammond, LA
- Used machine learning algorithms to analyze user sentiment on Twitter trends and assessed user credibility to establish focus groups for targeted sentiment analysis.

PROJECTS

[LLM] Chord Variations - Developed, deployed, and achieved front page status on Hacker News for a GPT-4 powered music creation aid web application, with 8,000+ users and 11,000+ page views within the first three days of launch.

[Music] "SWATTA" - Trained audio generative AI models (RAVE and SampleRNN) to produce a unique music album, "SWATTA" for NY-based artists. The album contains four sections, where the first three sections played by artists were used as training data to generate the fourth section.

[Video] "Magadh" - Collected and pre-processed images to train StyleGAN to generate an audio-reactive latent space interpolation music video with 8000+ views. Used Librosa to extract audio features for audio reactivity and feed them into the model to create beat-synchronized visual transitions.

SKILLS

Python, NumPy, scikit-learn, pandas, Typescript, SQL, MATLAB, Azure