

DIWAS BHATTARAI

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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 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 regression modeling, attaining better results on larger datasets than subset-optimized physical models while facilitating extensive parameter integration.
- Developed a full-stack web application with Angular, D3, Flask, and MongoDB to assess model performance.

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 music remixing platform with 4000+ remixes.
- 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 water 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 healthcare web application through the development of new features.
- Evaluated mobile development technologies, leading to the development of cross-platform mobile applications.
- Developed real-time code analysis Visual Studio plugins to improve software development efficiency.

Research Assistant

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.

[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