Biplab Dahal

Email: biplab.dahal@coyotes.usd.edu ◇ Phone: +1 (605)-5217024 ◇ Portfolio Website: https://biplabdahal.com.np

Professional Summary

I am Biplab Dahal, currently pursuing my Master's Degree in Computer Science at the University of South Dakota, with more than 2 years of experience as a Software Engineer specializing in .NET programming. I am focused on expanding my skills through practical projects. My goal is to apply my technical expertise to contribute meaningfully and advance my career in technical field.

Professional Experience

Cedar Gate Services

Software Engineer 06/2022 - 08/2024

- Worked as a Software Engineer in the Payment Technology department at Cedar Gate, a U.S.-based healthcare technology company.
- Focused on enhancing operational efficiency and improving patient care for both payers and providers.
- Analyzed business and technical requirements to develop effective software solutions.
- Wrote standardized, maintainable code using .NET programming languages, including Visual Basic and C#.
- Evaluated and improved existing applications to enhance functionality, performance, and user experience.
- Contributed to the modernization and optimization of payment systems within the healthcare technology space.

Education

University of South Dakota Vermillion, South Dakota

Master's in Computer Science 08/2024 - Present

Tribhuvan University Kathmandu, Nepal

Bachelor's in Computer Engineering 2015 - 2019

Technical Skills

- **Data Science Tools:** Numpy, Pandas, Scikit-learn, Matplotlib/Seaborn, Tensorflow/Pytorch
- **Programming Languages:** Python, .NET Programming(Visual Basic/C#), C/C++
- **Web Development:** HTML/CSS, Javascript, Bootstraps, React, Photoshop
- **Other Tools:** Docker, Git/GitHub, SSMS, Visual Studio, VS Code, PyCharm

Academic Projects

Chatbot with LLama3.2:1b Flask, HTML/CSS, Data Science, Git/GitHub

* Developed a simple chatbot application using LLama 3.2:1b model from Meta.
* Deployed with Flask, providing a web interface for seamless user interaction.
* Integrated with a material science API to support domain-specific conversational queries.
* Utilized Langchain for managing prompt templates and enabling flexible dialogue flow.
* Employed dotenv for secure management of environment variables.
* Enabled conversational querying, allowing users to interact naturally with the chatbot.
* Designed to be modular and customizable, making it easy to modify and extend for other use cases.

Road Accident Severity Prediction Python, HTML/CSS, Data Science, Git/GitHub

* Worked on a project utilizing backpropagation techniques to train neural networks for predicting accident severity.
* Conducted in-depth analysis of road safety data to identify critical factors and trends in traffic incidents.
* Generated insights to help mitigate risks and guide policymakers and urban planners in developing effective road safety strategies.
* Combined predictive modeling with comprehensive safety analysis to support data-driven decision-making.
* Frontend responsibilities included designing and developing an intuitive, user-friendly interface for seamless user interaction.
* On the backend, focused on researching machine learning concepts and applying them to implement core functionalities.
* Gained hands-on experience with machine learning, especially in understanding neural networks and backpropagation techniques.

Agora Python, HTML/CSS, Django, Git/GitHub

* Agora utilizes a Collaborative Filtering algorithm to deliver personalized recommendations to users.
* The algorithm is similar to those used by platforms like Netflix (for show/movie recommendations) and Amazon (for product suggestions).
* Analyzes user search behavior to identify patterns in preferences and interests.
* Leverages user interactions and similarities between users or items to make relevant suggestions.
* Enhances the user experience by making it easier to discover new products, services, or content aligned with individual interests.
* Helps users engage more deeply with the platform by curating personalized content, improving satisfaction and retention.
* Demonstrates how data-driven insights can be used to deliver smart, intuitive recommendations in real time.

Certifications and Achievements

Road Accident Severity Prediction Python, HTML/CSS, Data Science, Git/GitHub

* I participated in a software competition at the Lite Technical Exhibition during my bachelor's degree, where I showcased my major project on road accident severity prediction and earned a certificate of participation.

Volunteer

* I volunteered at the Lite Technical Exhibition and was awarded a certificate for my participation.