Vinayak Kumar Singh

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Objective

To secure an internship opportunity that allows me to apply my expertise in Machine learning, computer vision, and Generative AI to create innovative applications. I aim to leverage my skills in database systems, AWS cloud services, Java, and Python, along with my strong analytical and problem-solving abilities, to contribute to cutting-edge projects in a dynamic and collaborative environment. My passion for leveraging AI technologies, combined with effective communication skills, will enable me to actively participate in the development process and deliver impactful solutions.

Education

Vellore Institute of Technology **2023 - 2025**
Master of Computer Applications *7.72/10 CGPA*

Atal Bihari Vajpayee Vishwavidyalaya **2020 - 2023**
Bachelor of Computer Applications *7.96/10 CGPA*

Skills

Languages: Python, Java, C++, JavaScript
Backend: Node.js, Express.js
Frontend: React, TailwindCSS, HTML, CSS, Bootstrap
Clouds & Databases: AWS (Lambda,DynamoDB,API Gateway), MYSQL
Machine Learning & AI: TensorFlow, scikit-learn, Keras
Computer Vision: OpenCV, MediaPipe
Developer Tools: Postman, VS Code, GitHub
Soft Skills: Leadership, Teamwork, Problem Solving

Projects

Credit Risk Analysis Project Source Code

- Developed a highly accurate **credit risk classification model** using **advanced techniques** such as **XGBoost**, achieving **100% precision**, **recall**, and **F1-scores** for predicting **loan defaults**.
- Implemented **rigorous data preprocessing**, **feature engineering**, and **hyperparameter tuning** to optimize model performance on **imbalanced credit risk data**.
- Employed **ensemble methods**, **cross-validation**, and **model interpretation techniques** to build a **robust** and **interpretable credit risk assessment solution**.

GeniusBot: AI-Powered Assistance with PDF Insight Live Link

- Developed an interactive **chatbot application** using **Streamlit**, **OpenAI's GPT-3.5-turbo language model**, and **PyPDF2** for **PDF text extraction**, enabling users to ask **context-based questions** on uploaded PDFs and **general queries**.
- Utilized **LangChain** for communication with **large language models**, implemented **state management** with Streamlit's session state, developed with **Python**, and leveraged **Git** for version control and collaboration.

Serverless Voting Application for Programming Languages Source Code — Live Link

- Developed a **cloud-native voting application** leveraging **serverless architecture** and various **AWS services** for scalability and cost-efficiency.
- Implemented the **frontend** using **React**, enabling users to view programming languages, access details, and cast votes through an interactive UI.
- Utilized **AWS Lambda** functions for backend logic, **API Gateway** for API management, and **DynamoDB** for storing application data in a **NoSQL** database.

Achievements

- Led the Technical Team at **AVR Club VIT**, actively spearheading the development and maintenance of the club's website to enhance its functionality and user experience.
- Made **over 1300+** impactful GitHub contributions to open-source projects, demonstrating commitment to collaborative software development.