PRADYUMN PUNDIR

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EDUCATION

Stevens Institute of Technology, Hoboken, NJ December 2023
Master Of Science In Computer Science 3.934 GPA
Jaypee University Of Information Technology, INDIA July 2018 - July 2022
Bachelor Of Technology In Computer Science 8.26 GPA

TECHNICAL SKILLS

Language & Database: Python, JavaScript, HTML, CSS, PostgreSQL, Firebase, MongoDB

Framework & Libraries: NumPy, Pandas, Scikit-learn, TensorFlow, Keras, MLflow, Express, Node.js

Other Skills & Technologies: Machine Learning, Deep Learning, Natural Language Processing, Large Language Model, Linux, CI/CD, Docker, Flask, Data version control, Git, Jenkins, GitHub actions

EXPERIENCE

Developer Analyst Intern June 2023 - August 2023

Barclays, Whippany, NJ

- Built a hybrid recommendation system using context based and collaborative filtering allowing the infrastructure and the technology to team collaborate effectively covering 3000+ employees
- Built a high-performance, high-scalable, and effortless web portal using flask, containerized it using docker, implemented continuous testing, integration & deployment. The web portal resulted in improved employee interaction & network growth by 36%
- Collaborated with stakeholders, quality assurance, and other software development teams to align with goals & gather requirements across 3 different regions, Managed the data science team to ensure model testing, validation, collaborative practices, improved code quality, and optimized procedures demonstrating effective project management

Research Assistant February 2024 - Present

Stevens institute of technology, NJ

- Enhanced the performance of the ChatGPT model through meticulous fine tuning using local data, resulting in more adept and context-aware chatbot
- Seamlessly integrated the refined chatbots into a user-friendly web interface using Flask, facilitating convenient user access and interaction
- Implemented a systematic approach to analyze user interaction with the chatbot, performed sentimental analysis to identify the areas of refinement, and fine-tuned the chatbot's response to better align with user preferences and expectations

RESEARCH AND PUBLICATIONS

Towards a Multimodal System for Precision Agriculture using IoT and Machine Learning

IEEE ICCCNT 2021, IIT Kharagpur, INDIA

- Discovered methods to improve crop productivity with less human intervention.
- Implemented diverse machine learning algorithms such as Random Forest, LGBM, and KNN, Pre-Trained CNN models such as VGG16, Resnet50, and DenseNet121

On CI/CD for Automated Deployment of Machine Learning Models using MLOps

IEEE AIKE 2021, Laguna Hills, CA, US

- Study provides a more in-depth look at machine learning lifecycle as well as key contrasts between DevOps and MLOps
- Includes tools and methodologies for executing the CI/CD pipeline of machine learning frameworks

ACADEMIC PROJECTS

Body-Fat-Prediction-with-Machine-Learning-and-MLOps

- Buit a framework using machine learning algorithms Random Forest, Decision Tree, Extra Trees, and KNN to predict obesity levels, body weight, and fat percentage levels, followed by the Hyper-parameter optimization to increase model's accuracy
- Implemented continuous integration and continuous deployment (CI/CD) to deploy a user-friendly web app using Python Flask on Azure. Utilized DVC and MLflow for model performance tracking, resulting in an accessible and optimized solution for predicting body metrics through machine learning
- The research project was published in MIPRO 2021, Optija, Croatia

Symptom Extraction and Linking from Vaccine Adverse Event Reports

- Applied advanced NLP techniques, including sequence labeling, to extract symptoms from Vaccine Adverse Event Reports (VAERS), showcasing expertise in linguistic analysis
- Led a successful project in developing a robust sequence labeling model for vaccine adverse event identification. Overcame language variability challenges in VAERS reports through a comprehensive data preprocessing pipeline
- Demonstrated technical prowess with a multi-step data preprocessing pipeline, state-of-the-art NER technology, and achieved 97% accuracy using Logistic Regression for vaccine adverse event identification