PRADYUMN PUNDIR

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EDUCATION

Master of Science in Computer Science   Aug 2023 – Dec 2023

Stevens Institute of Technology, Hoboken, NJ   3.953 GPA

TECHNICAL SKILLS

Language & Database: Python, JavaScript, PostgreSQL, Firebase, MongoDB
Framework & Libraries: NumPy, Pandas, Scikit, TensorFlow, Keras, Express, Node.js, React.js, MLflow
Other Skills & Technologies: Machine Learning, Deep Learning, NLP, AWS, CI/CD, Docker, Kubernetes

EXPERIENCE

Machine Learning Engineering Intern   June 2023 – Present

Barclays, Whippany, NJ
- Built a hybrid recommendation system using collaborative and content-based filtering allowing the infrastructure and the technology team collaborate effectively covering 3000+ employees
- Built a high-performance, scalable, and effortless on premise solution using docker. Implemented continuous testing, integration & deployment resulted in improved employee interaction & network growth by 36%
- Collaborated with stakeholders to align with goals & gather requirements across 3 different regions, demonstrating effective project management. Fostered a more connected & engaged workforce through user-friendly interface

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 various 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

MOFit: A Framework to reduce Obesity using Machine learning and IoT

MIPRO 2021, Opatija, Croatia
- Built a framework using machine learning algorithms Random Forest, Decision Tree, Extra Trees, and KNN to predict obesity levels, bodyweight, and fat percentage levels, followed by the Hyperparameter optimization to increase model's accuracy

ACADEMIC PROJECTS

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

- Developed a comprehensive machine learning framework utilizing algorithms such as Random Forest, Decision Tree, XGBoost, Extra Trees, and KNN, with hyperparameter optimization (HPO) using Genetic Algorithm, Random Search, Grid Search, and Optuna. Achieved accurate predictions for obesity levels, bodyweight, and fat percentage.
- 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.

Human Action Recognition

- Conducted research on the rapid expansion of online education and analyzed user feedback for top courses from prominent websites using machine learning techniques like SVM and Naive Bayes for sentiment score prediction. Explored the data with EDA, including semantic networks and other techniques.