

## PRADYUMN PUNDIR

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### EDUCATION

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#### Master of Science in Computer Science

Stevens Institute of Technology, Hoboken, NJ

August 2023 – December 2023

3.953 GPA

### TECHNICAL SKILLS

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**Language & Database:** Python, JavaScript, PostgreSQL, Firebase, MongoDB

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

**Other Skills & Technologies:** Machine Learning, Deep Learning, NLP, AWS, CI/CD, Docker, Kubernetes, Jenkins, Power BI, (Data Version Control) DVC, Git

### EXPERIENCE

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#### Data Science Intern

June 2023 – August 2023

Barclays, Whippany, NJ

- Build a hybrid recommendation system using collaborative and content-based filtering allowing the infrastructure and the technology team collaborate effectively covering 3000+ employees
- Used Power BI to visualize our recommendation system's impact, aiding informed decisions. Engaging dashboards and reports deepened understanding of performance, enhancing employee engagement and network growth insights
- Built a high-performance, high-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 and communication skills

### RESEARCH AND PUBLICATIONS

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#### 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

#### 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

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#### 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

- Provided valuable insights to users through comprehensive user feedback analysis, aiding informed course

selection and enhancing online learning outcomes