

Anusha Mahesh

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SUMMARY

MS Computer Science candidate at RIT with hands-on experience building ML systems — from federated learning architectures to computer vision pipelines. Applied skills across an industry internship and graduate projects using real-world datasets. Seeking a Summer 2026 internship in ML, AI, or data analytics.

SKILLS

Programming Languages: Python, Java, C++, SQL

Machine Learning & AI: Machine Learning, Federated Learning, Computer Vision, Model Evaluation

Libraries & Frameworks: NumPy, Pandas, scikit-learn, PyTorch, OpenCV, Matplotlib

Cloud & DevOps: AWS (EC2, S3, Lambda, DynamoDB, CloudFront, IAM), Terraform, Docker, Git, GitHub, GitHub Actions

Databases: MySQL

EXPERIENCE

Machine Learning Intern

Aug 2023 - Oct 2023

Princeton Smart Engineers | Bengaluru, India

- Developed and evaluated supervised machine learning models to predict cancer risk using structured healthcare datasets
- Performed data preprocessing, feature engineering, and exploratory data analysis on **1,000+ patient records** with clinical and lifestyle attributes
- Implemented and compared classification models including Random Forest and Support Vector Machines, evaluating performance using accuracy metrics and confusion matrices

PROJECTS

Personalized Federated Learning (FedPer) for Non-IID Data

Dec 2025

Graduate Project | Rochester Institute of Technology

- Implemented personalized federated learning (FedPer) by partitioning models into shared base layers and client-specific personalization layers to address non-IID data challenges
- Designed and trained a ResNet-34 FedPer architecture on CIFAR-10 across **8 clients** with controlled non-IID class distributions ($k = 4, 8, 10$)
- Achieved **86.44% accuracy** under extreme non-IID settings ($k = 4$), while reducing communication overhead by **15%** by aggregating only base layers

Zero-Bit Biometric Watermarking for Document Security

Dec 2023

Academic Project | Bangalore Institute of Technology

- Designed a zero-bit biometric watermarking system to ensure document integrity using **iris and fingerprint biometric data**
- Implemented encryption-based watermark embedding techniques to protect documents against tampering and unauthorized modifications
- Evaluated the robustness of the watermarking approach under common document alterations to validate security and reliability

EDUCATION

Rochester Institute of Technology (RIT), Rochester, NY

Jan 2025 - May 2027

Master of Science in Computer Science (GPA: 3.84 / 4.00)

Relevant Coursework: Foundations of Artificial Intelligence, Introduction to Machine Learning, Foundations of Computer Vision, Algorithms & Complexity, Engineering Cloud Software Systems