

# Maryam Taeb

AI/ML Researcher

## WORK EXPERIENCE

**SPADAL LAB**, Tallahassee, Florida  
*FAMU-FSU College of Engineering*

Research Assistant (ML & NLP) 07/2021 – Present

- Developed a blockchain-based decentralized federated learning framework that integrates MetaMask and machine learning models via Flask to facilitates targeted data extraction and deepfake detection, enhancing traceability and compliance with legal standards
- Analyzed ML models (XceptionNet, EfficientNet, DenseNet, VGG19) via TensorFlow Model Analysis and enhanced EfficientNet model with attention mechanism, achieving a 98% performance increase over benchmarks on the CDDDB dataset.
- Analyzed NLP models (Word2Vec, Glove, Electra, BERT) and Fine-tuned Google’s BERT-base model using Transfer Learning achieving 99%
- Optimized metadata extraction and data retrieval efficiency using IPFS & EXIF, reducing storage needs by over 200%

**Florida A&M University**, Tallahassee, Florida  
*School of Architecture & Engineering Technology*

Adjunct Faculty 07/2023 – 12/2023

- Communicated Technical Content - Delivered C Programming and Digital Electronics lectures, promoting active learning pedagogy, enhancing student understanding and practical skills.
- Curriculum Development & Mentoring - Redesigned syllabus for optimal engagement; mentored students, promoting active learning and knowledge dissemination.

**Apple**, Seattle, Washington

*UI Understanding team at HCMI group in AI/ML organization*

AI/ML Researcher 05/2023 – 09/2023

- Engineered a patented LLM-based multi-agent planner for automated accessibility testing, garnering over 1000 access requests and significantly improving QA processes at Apple.
- Optimized UI testing by integrating diverse modules (Pixel-based icon recognition & OCR), reducing required LLM interaction by 40%, which decreased operational costs and improved response times.
- Collaborated with testers to design an innovative output product that streamlined bug reporting, and test planning for testers, enhancing understanding of accessibility features and increasing testing efficiency by 25%.

## PREVIOUS EXPERIENCE

**Research & Teaching Assistant**, FAMU, Tallahassee, FL 01/2020 – 07/2021  
**Full Stack Developer (Internship)**, XI Media, Orlando, FL 07/2019 – 12/2019  
**Peer Mentor**, FAMU & UCF ACM-W, Tallahassee & Orlando, FL 07/2017 – 01/2023

## CONTACT

Florida, United States  
+1 347-824-4438  
Mr21cg@fsu.edu

## SKILLS

### Hard Skills:

- Generative AI
- Deep Learning
- Natural Language Processing
- Data Mining

### Techniques:

- Computer Vision
- Prompt Engineering
- Data science
- Fairness Analysis
- Performance Optimization
- Teacher-Student Training

### Tools and Software:

- Python
- Flask
- TensorFlow, Keras, PyTorch
- NumPy, Pandas, Scikit-learn, SciPy
- Shell Scripting
- Solidity
- SQL

### Cybersecurity:

- Autopsy
- FTK Imager
- Volatility
- Wireshark

### Languages:

- English (Proficient)
- Persian (Native)

## EDUCATION

FAMU-FSU College of Engineering  
Doctor of Philosophy  
Electrical & Computer Engineering  
Tallahassee, FL  
07/2021 - 07/2023

## Certificates

- IBM Blockchain Foundation Developer
- Cyber Defense Certificate
- Chainalysis Cryptocurrency Fundamentals (CCFC)