

# SHRUTI BRAHMA

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## SUMMARY

AI researcher and Provost Fellow with a strong foundation in data science and a track record of impactful research spanning explainable deep learning, multimodal AI, and cybersecurity. Award-winning researcher (AICTA'23 Best Paper) with publications in Springer and ASEE. Skilled in deep learning, NLP, and cloud deployment, with a track record of transforming research into practical solutions. Adept at bridging theory with Intel RealSense, intelligent network routers, and predictive dashboards.

## EDUCATION

**M.S. in Data Science**, University of New Haven

Sept 2024 – Present

**B.Tech in Computer Science and Engineering**, JNTUH University

July 2020 – June 2024

## SKILLS

Languages C/C++, Python, ReactJS, Kotlin

Machine Learning TensorFlow, NLTK, YOLOv5, OpenCV, Neural Networks, NLP, Pandas

Tools Android Studio, SQL, Git, Data Visualization, Advanced Data Analysis

Data Science Predictive Modeling, Feature Engineering, Data Cleaning, Statistical Analysis

## EXPERIENCE

**Research Assistant (Provost Fellowship)**

Sept 2024 – Present

University of New Haven

- Conducting funded research projects in AI and data science. Collaborating on multimodal AI systems and XAI.

**AI Engineer**

Apr 2024 – Sept 2024

Purview (UK)

- Developed assistive technology for Vuzix Smart Eyewear with voice commands + streaming for drone.

**AI-Cybersecurity Engineer**

Jul 2023 – Oct 2023

Centre for Development of Advanced Computing (C-DAC), Ministry of Communications, India

Vulnerability scanning using Heuristic AI on Nmap, Burp Suite and for Log4j and implemented secure file transfer solutions via MoveIt.

## PROJECTS

• **Intel RealSense 3D Hazard Detection**

Mar 2024

Developed multimodal dataset and AI pipeline for depth-aware hazard detection using Intel RealSense D435i.

• **Explainable AI for Infrastructure Cracks**

Aug 2023

Built explainability pipeline with Grad-CAM and faithfulness metrics to evaluate CNN, ViT, and custom models.

• **Wireless AI Router**

May 2024

Designed Raspberry Pi-based router for SYN flood attack detection with XGBoost/LightGBM models and real-time dashboards.

## RESEARCH & PUBLICATIONS

**Impact of Activation Functions on Malware Detection**

2023

Presented at AICTA'23 (International AI Conference), awarded “Best Paper Presented.” Published in SCOPUS-indexed Springer Series (Springer Nature Book Chapter).

**Data-Driven Decision Making for Enrollment Trends and Educational Policy Analysis**

2025

Presented at ASEE Annual Conference. ASEE Publications.

## ACHIEVEMENTS

• Awarded TCoE Endowed Graduate Fellowship -University of New Haven (2025).

• Awarded “Outstanding Paper” at AICTA, PEC Chandigarh (2023).

• Qualified in National Engineering Olympiad (2022).