Harsha Udutha

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PROFESSIONAL SUMMARY

Computer Science graduate student at George Mason University with a strong background in software engineering, mobile development, and applied machine learning. Experienced in full-stack development, data analysis, and building cross-platform applications. Adept at delivering efficient, scalable solutions through collaborative problem-solving. Seeking to apply my skills in data-driven environments to create impactful and innovative systems.

TECHNICAL SKILLS

- **Languages:** Python, Java, C, C#, SQL, HTML, CSS
- **Mobile & Wearable Dev:** Kotlin, Android Studio, Wear OS, Jetpack, MessageClient API
- **Frameworks & Libraries:** TensorFlow, TensorFlow Lite, Hugging Face, Scikit-learn
- **Game & Graphics:** Unity 3D, JOGL, Google Cardboard API, Blender
- **Tools:** Git, GitHub, Docker, Jupyter Notebook, VS Code/Studio, PlasticSCM
- **Core Competencies:** Machine Learning Pipelines, Cross-Platform App Development, Data Visualization, Predictive Modeling, Agile, Microservices

CORE STRENGTHS

Problem Solving, Cross-functional Collaboration, Agile Leadership, Public Speaking, User-Centric Design

EDUCATION

M.S. in Computer Science Aug 2023 – May 2025
George Mason University, Fairfax, VA
GPA: 3.60
Relevant Coursework: Systems Programming, Data Mining, Algorithms, Computer Graphics, Software Engineering, Mobile Immersive Computing

B.Tech in Computer Science May 2019 – Apr 2023
GITAM University, Visakhapatnam, India
GPA: 3.52
Relevant Coursework: OOP, Data Structures, Operating Systems, Networks, DBMS, AI, Cloud Computing

EXPERIENCE

Outdoor Supervisor Aug 2021 – Dec 2021
George Mason University, Fairfax, VA
- Collected hourly usage data of sports grounds and uploaded reports to the Connect2 platform to maintain accurate facility records.
- Analyzed venue demand trends using Python (Pandas, Matplotlib) to assist in scheduling and resource allocation.
- Ensured the safety and cleanliness of outdoor facilities; provided assistance in minor injury situations and managed gate closures.
- Coordinated with staff to prepare and reset venues for student events, ensuring operational readiness and compliance.

Unity Developer Intern May 2022 – Apr 2023
Quleep Pvt Ltd (Remote)
- Developed core gameplay mechanics, character movement systems, and interactive UI components in Unity for a metaverse platform.
- Implemented reusable C# scripts for object interactions, avatar control, and environment behaviors.
- Collaborated with designers and artists to integrate 3D assets, animations, and shaders into the production pipeline.
- Executed iterative QA testing cycles and reported over 25+ bugs and performance issues, contributing to stable product builds.

Data Science Summer Intern May 2022 – Jun 2022
TCR Innovations (Remote)
- Built supervised learning models to predict employee attrition using classification algorithms such as Random Forest and Logistic Regression.

- Performed data cleaning, feature engineering, and exploratory data analysis (EDA) on HR datasets with 10,000+ entries.
- Evaluated models using precision, recall, F1-score, and ROC-AUC to optimize performance metrics.
- Documented the entire ML pipeline and presented actionable insights through charts and written reports to project mentors.

Student Coordinator – Career Services Mar 2022 – Oct 2022

GITAM Career Guidance Centre, India

- Mentored over 400+ students on study abroad programs, visa processes, and international application requirements.
- Designed and distributed surveys to collect student interest data; cleaned and analyzed responses to identify top destinations and course trends.
- Created visual dashboards and summary reports using Excel and Python for faculty decision-making and presentation to administrators.
- Maintained data confidentiality and compliance while organizing career events, workshops, and university partner meetings.

CERTIFICATIONS

- Post Graduate Certificate in Software Engineering for Data Science – IIIT Hyderabad (Great Learning)
- Unity Game Development – Unity Technologies (Udemy)
- Machine Learning Foundations: A Case Study Approach – University of Washington (Coursera)
- Data Analysis with Python – IBM (Coursera)
- Cryptography – University of Maryland, College Park (Coursera)
- Cloud Computing Foundations – Duke University (Coursera)
- Introduction to Computer Vision and Image Processing – IBM (Coursera)

PROJECTS

Predictive Stress Monitoring (Wear OS + Android) 2025

Course Project – Kotlin, TensorFlow Lite, Android Studio

- Developed a real-time stress prediction system that processes heart rate, step count, and accelerometer data from a Samsung Galaxy Watch.
- Trained and deployed a TensorFlow Lite model on-device using over 300K samples from WESAD, AffectiveROAD, and UBIStress datasets.
- Implemented a 3-minute rolling buffer with contextual filtering to reduce false alerts from exercise or caffeine-induced HR spikes.
- Enabled bidirectional communication between watch and phone using the Wearable Data Layer API, delivering early stress warnings with interactive user feedback.

TRADEPLAY – Game Exchange Marketplace Ongoing

Personal Project – HTML, CSS, JavaScript, Firebase, Python (Planned: React.js, Node.js, Express, MongoDB)

- Designed and developing an online platform for trading, and purchasing video games, consoles, and accessories in a secure, user-driven environment.
- Planned to build a responsive frontend with vanilla JavaScript and Bootstrap, integrated Firebase for authentication and user profile handling.
- Planned intelligent features such as AI-based fraud detection, price prediction, image moderation, and semantic search using Python and TensorFlow.

Economical VR Gaming System Apr 2023

Course Project – Unity, Google Cardboard API, C#

- Built a low-cost VR gaming prototype using Google Cardboard and Android-compatible joysticks for immersive experiences on budget smartphones.
- Developed interactive 3D environments, joystick-based controls, and mobile-optimized rendering pipelines.
- Reduced hardware dependency and total VR system cost by over 70%, enabling broader accessibility for education and indie developers.

Parking Violation Prediction Aug 2022

Internship Project – Python, Pandas, Scikit-learn, Matplotlib

- Analyzed New York City open violation data to identify high-risk areas and timeframes for parking infractions.
- Engineered temporal and spatial features from raw data; built and tuned classification models (Random Forest, Logistic Regression).
- Evaluated model performance with cross-validation and ROC-AUC metrics; visualized insights through interactive plots and dashboards.
- Provided actionable recommendations to support enforcement planning and data-informed urban decision-making.