Shanthan Bajjuri

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Kent, OH.

Professional Summary

Embedded AI & Data Specialist with expertise in developing scalable, connected systems across the IoT and Data Analytics landscape. Combines hands-on experience in hardware prototyping (ESP32, Biometric Sensors) and embedded C++/Python programming with strong proficiency in statistical modeling (R, SQL) for extracting predictive business insights (Attrition, NPS). Driven by the self-initiated development of a Wearable AI Assistant utilizing edge computing (ONNX Runtime) for real-world impact.

Technical Skills

Category	Skills & Tools
Embedded & IoT	ESP32, Arduino, Microcontrollers, Biometric Sensors, Modular Design, Blynk, C++, Python
AI & Edge Computing	ONNX Runtime, Python, Mat lab
Data Science & Analysis	R, SQL, Regression Modeling, Hypothesis Testing, ggplot2
Tools & Platforms	Git, VS Code, RStudio, Technical Documentation

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Projects

Wi-Fi Home Automation System

Tools: C++, Python, Blynk IoT Platform

- Developed a smart home automation system enabling remote control of appliances via mobile interface
- Implemented secure communication protocols and real-time device monitoring using microcontrollers

IoT-Based ATM Security System

Tools: C++, Python, Sensors & Microcontrollers

- Engineered a sensor-based security system to detect unauthorized access at ATMs
- Integrated motion detection and alert mechanisms with real-time data transmission

AI Wearable Assistant (Self-Initiated Project) IN-PROCESS

Tools: Microcontrollers, Biometric Sensors, ONNX Runtime, C++, Modular Design

- Independently designing a modular wearable assistant integrating biometric sensing and edge AI capabilities
- Prototyping hardware architecture for low-power, real-time inference using ONNX models
- Developing firmware and system logic for contextual decision-making and user interaction
- Creating technical documentation and preparing for utility patent filing and future commercialization

Employee Attrition Analysis (Group Project)

Tools: R, R Markdown, ggplot2

- Analyzed HR data to identify key predictors of employee turnover
- Applied hypothesis testing, logistic regression, and visualizations to derive insights
- Delivered a 10-minute presentation with executive summary and reproducible R code

BUS 641 Final Project – NPS Prediction for Tech Sales Reps

Tools: R, Regression & Data Mining Techniques

- Explored Net Promoter Score (NPS) data to classify high-performing sales reps
- Conducted exploratory data analysis, regression modeling, and performance evaluation
- Presented findings via video and slide deck with strategic recommendations for improving NPS

Education

[Anderson university , South Carolina] — [master's in computer science]
August 2024 – May 2025