

# Sidhant Gurung

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## EDUCATION

### The University of Texas at Arlington

*Expected Graduation:* May 2027

*Bachelor of Science in Electrical Engineering* | GPA: 3.75

- Awards: Dean's List; HKN Nominee; NSCS Invitee
- Relevant Coursework: Embedded Systems, Circuit Analysis II, Power System Stability & Control

## PROJECTS

### Haptic Focus Assistant (In Progress)

February 2026

- Designing a BLE-enabled wearable system using an ESP32-C3 microcontroller to reduce digital distraction through real time haptic and audio feedback.
- Developed system logic to receive Bluetooth Low Energy alerts from a smartphone application and trigger vibration and audio outputs with timing and safety limits.
- Documented system architecture and protection strategies for reliable embedded hardware design.

### AI Heart Rate Tracker (In Progress)

January 2026

- Designing a wearable biometric system integrating PPG heart rate and GSR sensors with an ESP32 for stress and anxiety detection.
- Developing a battery powered prototype with OLED feedback, data logging, and wireless transmission for future cloud analysis.

### Temperature Dependent Speed Controller

January 2025

- Designed a microcontroller-based temperature control system using PWM motor control and sensor feedback in C++.
- Created a custom enclosure in Fusion 360 and developed a PCB layout using AutoCAD to meet power requirements.

## EXPERIENCE

### Pulsed Power and Energy Laboratory, Arlington, TX

February 2026 - Present

*Undergraduate Researcher*

- Conducted undergraduate research on pulsed power and energy systems, focusing on controlled high-voltage discharge and energy transfer.
- Assisted with instrumentation, diagnostics, and data acquisition for laboratory research projects
- Collaborated with graduate students and faculty researchers in a team-based research environment.

### Kura Sushi, Euless, TX

January 2025 - Present

*Head Server*

- Lead a team of 5+ servers while managing \$10K+ in daily revenue and ensuring efficient workflow.

## LEADERSHIP & COMMUNITY INVOLVEMENT

### Institute of Electrical and Electronics Engineers (IEEE), Arlington, TX

August 2024 – Present

*Student Member*

- Participated in IEEE-hosted workshops and webinars focused on embedded systems and power engineering topics.

**Additional Involvement:** IEEE-PES, SASE, Association for Computing Machinery (ACM), KCA, SEAS

## SKILLS

**Languages:** C, C++, MATLAB, Python

**Hardware & Embedded:** Microcontrollers, Sensors (PPG, GSR), ADCs, PWM, Signal Conditioning, Oscilloscope

**Design & Tools:** Circuit Design & Analysis, Revit, I2C, SPI, UART, GPIO, PCB Layout, Control Systems, LTspice, Fusion 360, Lab Instrumentation, Soldering.