

Anish Sheth

331-302-1040 | anish7@illinois.edu | [linkedin.com/in/anish-s-sheth](https://www.linkedin.com/in/anish-s-sheth) | github.com/anishsheth05 | Chicago, IL

EDUCATION

University of Illinois Urbana-Champaign

Champaign, IL

B.S. Computer Science & B.S. Mathematics GPA: 3.88/4.0

May 2027

Coursework: Computer Networks, Computer Systems Engineering, Computer Security, Algorithms

TECHNICAL SKILLS

Languages: C, C++, Python, Rust, Verilog, x86-64 & RISC-V Assembly, Bash, CUDA, LaTeX

Embedded & Hardware: FreeRTOS, ESP32-C5, BLE 5.0, UART, bare-metal drivers, register-map programming

Networking: TCP/IP, UDP, sockets, sliding-window protocols, Scapy, Wireshark

Tools & Platforms: Git, Linux, Docker/Podman, QEMU, AWS, Snowflake, MongoDB, MySQL, Power BI

Libraries: pandas, NumPy, TensorFlow, scikit-learn

PROJECTS

RISC-V Operating System | *C, RISC-V Assembly*

Jan 2025 – May 2025

- Implemented a RISC-V OS (QEMU target) with virtual memory and paging, preemptive multithreading, a custom filesystem (kfs), and a UART shell
- Wrote bare-metal UART and disk drivers directly from datasheet register maps

Reliable Transport Protocol over UDP | *C*

April 2026

- Built a reliable one-way transport protocol over UDP with a SYN/SYN-ACK handshake, a 200-packet sliding window, per-packet acknowledgements, and timeout-based retransmission
- Measured throughput relative to link bandwidth on a two-VM testbed across configurations varying bandwidth, packet loss, and reordering

Covert Channel over TCP | *Python, Scapy*

October 2025

- Built a network covert channel that hides data in the TCP Selective Acknowledgement (SACK) option, verified to avoid flagging under Wireshark inspection
- Encrypted the hidden payload with AES in counter (CTR) mode

BLE Distance-Tracking Badge | *C, FreeRTOS, ESP32-C5*

Jan 2026 – Present

- Built BLE 5.0 firmware in C on FreeRTOS for ESP32-C5, estimating inter-badge distance from RSSI across up to 20 badges at ranges up to 100 ft

EXPERIENCE

Western Union

Denver, CO

Software Engineer Intern

June 2025 – August 2025

- Evaluated replacement BPM engines for the compliance backend as Camunda reached end of support; the recommended engine is slated to become the new production backend
- Built and secured a full-stack Express/React internal tool surfacing cross-functional compliance metrics
- Built a Power BI dashboard on Snowflake data for compliance operations

IT Expert System, Inc.

Schaumburg, IL

Software Developer

June 2021 – August 2021

- Automated graduation-certificate generation in Python (est. \$100K/yr manual labor saved, per program director) and encrypted personal data in MongoDB with SSH-tunneled access