Rohan Menon

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A Ph.D. student in Signal Kinetics at the MIT Media Lab working on embedded devices, wireless sensing/communication, and networking who loves working on hard problems in fast-paced teams.

Education

Massachusetts Institute of Technology Sep 2024 - Present
Ph.D. in Electrical Engineering and Computer Science

University of Washington Sep 2021 - Dec 2023
B.S. Electrical and Computer Engineering

Experience

Graduate Researcher in Signal Kinetics at the MIT Media Lab Sep 2024 - Present

- Underwater backscatter: a method for ultra-low power underwater sensing and comms
- Developed underwater backscatter ocean sensors with extreme battery life (years-long) and disruption tolerance, including low power sensing and networking firmware [SM Thesis] [Mobicom '25 Demo]
- Worked on new techniques for underwater imaging using higher-order reflections from underwater backscatter tags, enabling multi-dimentional localization with a single transceiver [Preprint]

Member of Technical Staff Intern at Sail Research May 2026 - Aug 2026

- Improved LLM inference performance by 1.6x on the Intel Gaudi accelerator by optimizing KV cache allocation
- Developed observability tools for hardware accelerators to help with kernel engineering

Embedded Hardware and Software Engineer at WaveWorks Mar 2024 - Sep 2024

- Designed a protocol for their custom, ultra-low-power wireless modems to support a range of applications - e.g. from infrequent sensor data to real-time streaming
- Wrote firmware and built software tools to make FPGA testing faster and easier
- Established a simulated RTL CI pipeline for our FPGA and ASIC design team

Undergraduate Researcher at the UW Sensor Systems Laboratory Feb 2022 - Mar 2024

- Developed embedded firmware for version 6 of WISP, a platform for battery-less, wirelessly powered sensors maintained by the lab [EnsSys '22]
- Built a ray-tracing based, GPU-accelerated, simulator for modeling RF propagation and networking between mobile agents [CCAA '23]

Skills

- Digital and analog circuit design, PCB design
- Mechanical design, rapid prototyping
- Wireless communication
- Embedded firmware (low power design)
- Full stack software development
- Signal processing