VAISHNAVI RANGANATHAN

Principal Researcher

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► EDUCATION

Ph.D. (EE)
University of Washington, Seattle
Dec 2018

MS. Degree (EECS)
Case Western Reserve University, Ohio
June 2013

B. Tech (EIE)
Amrita School of Engineering, Coimbatore India
July 2011

► PROFILE

- Sensing Systems research: Remote sensing, wearables/mobile, implantable, city-scale and AR. Multiple Patents, open sourcing and publications.
- Device development, deployment, user testing and sensor data analytics.
- Project lead: Project Inception, establish KPIs, architecture, deployment and evaluation
- Interdisciplinary collaboration: I enjoy connecting the dots across projects and people to work towards broader impact.

► WORK EXPERIENCE

Principal Researcher
Microsoft Research Redmond | 2024 – Present

Current focus: Leading applied innovation in multi-modal sensing, AI devices and privacy-preserving AI.

Affiliate Assistant Professor
ECE, University of Washington | 2022 – Present

Senior Researcher
Microsoft Research Redmond | 2019 - 2024

- Project lead for Food Vibes - Traceability and Sensing for Global Food Supply Chain: Bringing traceability and accountability to global food supply chains. Innovation in sensing and supply chain management solutions that meet global regulatory compliance (EUDR & FSMA).
- Project Eclipse: Hyperlocal city-wide air-quality sensing. As a part of the Urban Innovation Initiative, I worked with a cross-disciplinary team towards a large-scale deployment in the city of Chicago, where I drove sensor development, deployment, data analytics and user interface design.

Graduate Researcher
University of Washington, Seattle| 2013 – 2018

My graduate research lies at the intersection of technological innovation and its application to healthcare and sustainability. Areas of focus include

- Brain-computer Interface design and development
- Battery-free sensing & wireless communication
- Wireless power transfer and energy harvesting
- Sensor data analytics & approximate computing