

# Saarth Mehrotra

ENGINEERING MANAGER · EMBEDDED & IOT SYSTEMS

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5 granted US patents | Firmware deployed to a partner's 100 million lights | Led teams of 3–10 engineers

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| SUMMARY      | Ten years at Ivani building sensify™, its patented software that adds presence sensing to smart devices with no new hardware. Firmware engineer, then team lead; now one of two engineering managers reporting to the CTO, and technical lead on the partnership behind its 2025 public launch.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |      |
| EXPERIENCE   | Engineering Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Apr 2019 – Present                                                                                                            |      |
|              | Ivani LLC · St. Louis, MO · Remote from Chicago, IL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                               |      |
|              | <ul style="list-style-type: none"><li>• <b>The 2025 launch.</b> Technical lead on the multi-year path to sensify's global launch: integrated with the partner's team remotely and on site internationally, designed real-world tests, and ran alpha and beta launches of their motion-sensing feature to public rollout on 100 million lights</li><li>• <b>Integration spec.</b> Own the API and ICD partners use to integrate Ivani's detection models</li><li>• <b>Partner work.</b> Ran over 30 OEM partner evaluations with their technical teams under NDA: remote and on-site demonstrations, integration planning, aligning requirements into cross-functional roadmaps, and protecting Ivani's IP and trade secrets</li><li>• <b>Team.</b> Grew and led a team of 3–10 engineers: ran technical hiring and onboarding, monthly 1:1s, semi-annual performance reviews, and an individual growth plan for each engineer</li><li>• <b>Strategy.</b> Member of Ivani's leadership team with the CEO and CTO: own the engineering roadmap and hiring plan, set partner priorities</li><li>• <b>AI.</b> Shipped AI-built internal tools: a partner ROI and value calculator, marketing demos, and a demo-kit evaluation harness; helped set Ivani's AI usage policy and workflow</li></ul> |                                                                                                                               |      |
|              | Firmware Engineer → Team Lead                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Jul 2016 – Apr 2019                                                                                                           |      |
|              | Ivani LLC · St. Louis, MO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                               |      |
|              | <ul style="list-style-type: none"><li>• <b>Firmware team.</b> Led the firmware team (two to six engineers) through four generations of the sensify platform, owning design, implementation, documentation and testing</li><li>• <b>Embedded C.</b> Built embedded firmware in C with test-driven development across Zigbee, Thread, Bluetooth, and Wi-Fi, tested in continuous integration</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                               |      |
|              | Five granted US patents, two pending, assigned to Ivani LLC. <b>Granted:</b> Presence Sensing US12449525B2 (2025); Network Self-Discovery US10477348B2 (2019), US11178508B2 (2021); Electrical Faceplate US10072942B2 (2018), US10627253B2 (2020). <b>Pending:</b> Presence Sensing US20260043910A1; Leak Detection US20240378983A1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                               |      |
| PATENTS      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |      |
| EDUCATION    | B.S. Electrical and Computer Engineering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Aug 2012 – May 2016                                                                                                           |      |
|              | Franklin W. Olin College of Engineering · Needham, MA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                               |      |
|              | Year-long, Ivani-sponsored capstone: researched low-power wireless mesh for hospital building management, then built the outlet-cover prototype behind two granted patents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                               |      |
| CERTIFICATES | Breakthrough Innovation Strategy, MasterClass with X, The Moonshot Factory: framing 10x problems, rapid prototyping, pressure-testing ideas before committing a team                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                               | 2026 |
|              | Systems Design, Cornell University: context diagrams, risk analysis, decision matrices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                               | 2021 |
|              | Leadership and Management, The Wharton School: motivating talent, managing global firms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                               | 2020 |
| SKILLS       | Embedded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Firmware in C, Zigbee, Thread, Bluetooth, Wi-Fi, mesh networking, presence sensing                                            |      |
|              | Software                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Python, JavaScript, Git, test-driven development, continuous integration, code review                                         |      |
|              | Practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Requirements-based development, systems design, API and ICD authoring, Kanban                                                 |      |
|              | People                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Technical hiring, coaching, 1:1s, roadmapping, cross-functional delivery, partner and stakeholder management, risk management |      |
|              | AI Tools                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Claude, Claude Code, Hermes, Fireworks AI; AI-assisted development                                                            |      |