

Surendra Bharath Pale

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CAREER SUMMARY

Passionate product innovator and the **longest-serving team member after the Founder/CEO** at Futuristic Labs, having grown alongside the company from its early days as a **3-person startup to a thriving 65+ member team**. Over **6+ years** of hands-on experience turning ideas into integrated hardware–software products that move from concept to reality. Driven by curiosity, problem-solving, and the satisfaction of seeing a product in action, including leading a flagship project that generated over **₹1 crore in revenue within its first 6 months**.

EDUCATION

IITDM Kancheepuram

B.Tech - Mechanical Design & Manufacturing (MDM)

Robotics Club – Core Member / Manager (2017 – 2018)

Chennai, India

Graduation Date: Apr 2019

Institute of product leadership (IPL)

International certificate in product management

Certificate

Graduation Date: May 2025

WORK EXPERIENCE

Klynk (A Brand of Futuristic Labs)

Product Owner / Product Leader

Hyderabad, Telangana

Aug 2024 - Present

• Chai Monk 2.0

- Led Chai Monk 2.0 product lifecycle from concept to production, delivering **99% consistent chai making** in terms of dispense and taste for **80,000 chai recipes** and generating **₹1 crore revenue** in **6 months**.
- Acted as **primary liaison** between client and internal engineering, R&D, and production teams, facilitating **15+ requirement-gathering sessions** and achieving **100% stakeholder alignment**.
- Directed a **13-member cross-functional team** (mechanical, electrical, firmware, and software engineers) to deliver the project **on schedule with zero defects**.
- Oversaw **5 pilot deployments** in high-traffic cafés, gathering **1000+ user feedback points** and implementing **15+ product enhancements** for performance and usability.
- Negotiated with suppliers to **reduce BOM cost by 12%**, saving **₹4.5 lakh annually** without compromising quality standards.
- Implemented **rapid prototyping cycles** and **Agile sprint methodology**, reducing iteration time by **30%** and cutting lead time by **3 weeks**.
- Established **quality assurance processes**, design documentation, and version control workflows, reducing R&D-to-production transition time by **25%**.

• Flavour Monk

- Spearheaded **Flavour Monk add-on dispenser** development, achieving **0.07g dispensing precision** and production readiness in **5.5 months**.
- Single-handedly developed **embedded firmware** and mechanical design, reducing resource needs by **50%**.
- Integrated mechanical, electronics, and firmware systems with **100% functional compatibility** on the first production run.
- Optimized design and assembly workflows, reducing production setup time by **40%** and enabling faster manufacturing ramp-up.

Area Product Owner

Jun 2023 - Jul 2024

- Owned end-to-end development of **Riku – Automatic Rice & Curry Maker** complex subsystems (spice dosing, liquid handling, ingredient dispensing), improving production throughput by **15%**.
- Coordinated cross-functional engineering teams to complete **50+ system integration and testing cycles**.

- Collaborated with culinary specialists to align product design with recipe and food safety standards, reducing redesign cycles by **20%**.
- Represented the company at **Techsparks, Makerfaire, and Saga Carnival**, generating **500+ qualified investor and customer leads** and increasing brand visibility.

Senior R&D Mechatronics Engineer

Jun 2021 - May 2023

- Led the **concept-to-prototype development** of Riku, completing **12 major prototypes** with iterative design validation.
- Established structured problem-solving and concept development workflows, reducing issue resolution time by **25%**.
- **Key contributor** to winning the **Red Dot Design Award**.
- Designed and tested **mechanical, embedded, and software subsystems**, completing **100+ integration tests**.
- Applied **DFM/DFA methodologies**, reducing assembly time by **25%** and cutting manufacturing costs by **8%**.
- Implemented the **MAHD framework** for hardware development, improving project predictability by **20%**.
- Evaluated and tested multiple **Agile project management tools** (Jira, Zoho Sprints, Asana, Airtable), selecting and implementing the most effective solutions, which improved team task tracking efficiency by **30%**.
- Conducted **20+ structured user testing sessions**, increasing feature adoption rate by **18%**.

R&D Mechatronics Engineer

Jul 2019 - May 2021

- Jointly developed **KOMA – Automatic Cocktail Maker** with a two-member team, achieving **>95%** dispensing accuracy during 3 pilot runs.
- Worked on mechanical design, embedded firmware development, and user interface programming using Raspberry Pi.
- Collaborated with **10+ bartenders and end-users** to refine the product's ergonomics and UX, improving satisfaction scores by **25%**.
- Designed and fabricated **in-house PCB** using 3D printing, copper plating, and custom etching, reducing prototyping costs by **20%**.
- Developed and tested a fully functional pilot-run prototype within 9 months; although production was halted due to COVID-19, the prototype achieved all performance targets and was ready for market validation.
- After the project was paused, transitioned to the **Riku – Automatic Rice & Curry Maker** project as a Mechatronics Engineer, contributing to subsystem development and integration.

Final Year B.Tech Project (solo)

IITDM kancheepuram

Automatic Hot Sandwich Maker / Vending Machine

Jan 2019 - May 2019

- Designed and built a **fully functional working prototype** of an automatic sandwich-making machine that can switch to vending mode after restaurant hours, under the guidance of Dr. Naveen Kumar.
- Owned the project end-to-end — from **concept ideation** and **market research** to **design, manufacturing, and coding**.
- Created a **Morphology chart** to finalize mechanisms, materials, and designs; developed precise **3D CAD models** and manufactured all components in-house.
- Utilized **laser cutting, 3D printing, and Bosch cutting tools** for fabrication.
- Programmed the system using an **Arduino microcontroller**, integrating mechanical and electronic systems for smooth, automated operation.

CPDM, IISc Bangalore

Bangalore, Karnataka

Product Design & Prototyping Intern

May 2018 - Dec 2018

- Selected for a prestigious internship at the **Centre for Product Design and Manufacturing (CPDM), IISc Bangalore**.
- Collaborated in a **2-member team** to design and prototype **Physics experimental kits** for Class 11 and 12 curriculum, focusing on **Ray Optics** and **Total Internal Reflection** concepts.
- Engineered kits to meet constraints of **low cost, easy manufacturability, simple assembly, and availability of materials in rural areas**.

- Designed, fabricated, and tested prototypes to ensure accuracy and durability in educational use.
- Contributed to an innovative kit design currently in the **patent filing process**.
- **Invited to the All India DIC Meet at IIT Hyderabad**, and **proudly showcased** the project **5 years after its completion** — a rare opportunity that celebrated its enduring value and continued influence in hands-on science education.

SKILLS & INTERESTS

Skills: Product Development: End-to-end design, prototyping, testing, and production optimization; Technical Tools: Fusion 360, AutoCAD, Luxion KeyShot, Python, Arduino, Raspberry Pi; Engineering Expertise: DFM, DFA, DFMEA, system engineering, stack-up analysis; Leadership & PM: Agile/Scrum, MAHD framework, Jira, Zoho Sprints, Asana, Airtable; Fabrication & Prototyping: 3D printing, electronics integration, rapid prototyping

Interests: Product design & prototyping, maker culture & DIY innovation, robotics & automation, science communication & STEM outreach, traveling to explore local engineering practices, participating in hackathons & design challenges.

Extracurricular activities

- Active in sports including badminton, table tennis, chess, cricket, and volleyball; avid reader;
- Participated in dance performances in farewell events.
- Performed mime act, a silent theatrical performance using expressions and gestures

ACHIEVEMENTS

- **National Recognition** – Bracelet design selected among **Top 30** in Autodesk’s 3D Design Monthly Challenge (*Jan 2017*).
- **1st Prize** – Swachh Bharat 3D Design Challenge (*Nov 2016*).
- **2nd Prize** – Mechanical event for creating a syringe-hydraulic movable mechanism achieving maximum distance in minimum time (*College Fest*).
- **1st Prize** – Robotics competition “Chamber of Secrets” in a team of 4 at IIITDM College Fest (*Mar 2017*).
- Winner of intra-college volleyball championship.
- Winner of table tennis at intra-company competition.
- Two-time winner in chess at intra-company competitions.