

SRI RAMANA SAMPATH

JUNIOR INDUSTRIAL / PRODUCT DESIGNER

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PROFESSIONAL PROFILE

Graduate Product Design Engineer completing an MSc in Advanced Product Design Engineering and Manufacturing at Kingston University London, with a 78.4% taught-module average at Distinction level and a BEng in Mechatronics, Robotics and Automation Engineering. Hands-on experience translating user and engineering requirements into product design specifications, concept decisions, 3D CAD models, functional prototypes and verification plans. Working knowledge of SolidWorks and practical use of Siemens NX, ANSYS Workbench, DFM/DFA, DFMEA and FDM additive manufacturing across projects from concept generation to testing, validation and design refinement.

TECHNICAL SKILLS

Product design and development: Requirements development, product design specifications, concept generation, concept selection, user-centred design, design evaluation, material selection, manufacturing principles, DFM, DFA and DFMEA.

CAD and design communication: Siemens NX, SolidWorks, Fusion 360, AutoCAD, 3D CAD, assembly modelling, engineering drawings, GD&T and PMI.

Prototyping, testing and manufacturing: FDM additive manufacturing, Bambu Lab X1 Carbon, functional prototypes, tolerance control, physical evaluation, product testing and validation, test planning, iterative design improvement and CAM fundamentals.

Engineering and mechatronics: ANSYS Workbench, structural FEA, rigid-body dynamics, vibration and drop/impact analysis, Arduino, sensors, electronics integration and robotics.

Software and visual communication: Microsoft Office; Adobe Illustrator, Adobe Photoshop and Figma for visualisation and presentation materials.

EDUCATION

MSc Advanced Product Design Engineering and Manufacturing | Kingston University London

Sep 2025 - Expected Sep 2026 | Taught-module average: 78.4% (Distinction level)

Bachelor of Engineering - Mechatronics, Robotics and Automation Engineering | Chennai Institute of Technology

Jan 2022 - May 2025 | CGPA: 8.05/10

SELECTED PRODUCT DESIGN AND ENGINEERING PROJECTS

MSc Dissertation - Mechanically Randomised Pop-Up Mechanism

Kingston University London | 2026 | Mechanism design, CAD, user-centred design, prototype verification

- Developed a mechanically interactive product using rotating, spring, latch and snap-fit concepts, supported by design research and manufacturing considerations.
- Selected a spring-and-latch concept by comparing reliability, reset performance, cost, user safety and manufacturability; defined a verification plan for consistency, durability and failure rate.

Beeflex Wearable Mechanical Support Device

Kingston University London | 2026 | Product development, Siemens NX, ergonomics, DFM/DFA

- Converted user and engineering needs into a product design specification and structured concept decision for a wearable arm-support device intended to reduce fatigue during repetitive lifting.
- Designed Siemens NX components and assemblies around ergonomics, fastening, fit and assembly, then independently fabricated and refined a functional 3D-printed prototype.

Independent Additive Manufacturing and 3D Printing

Personal product development | 1.5+ years | Bambu Lab X1 Carbon, FDM, functional prototypes

- Produced functional prototypes and small-batch products by iterating CAD geometry, print orientation, supports and material choice.
- Improved fit, surface quality and print reliability through tolerance control, assembly checks and physical evaluation of each design iteration.

SELECTED PRODUCT DESIGN AND ENGINEERING PROJECTS (CONTINUED)

Packaging Engineering Design, Simulation and Optimisation

Kingston University London | 2026 | Siemens NX, ANSYS Workbench, DFMEA, Taguchi optimisation

- Designed a consumer-product packaging system in Siemens NX and evaluated structural loading, vibration and drop performance in ANSYS Workbench.
- Applied DFMEA, material selection and Taguchi-based optimisation to compare failure modes and geometry changes against protection, transport, stacking and manufacturing requirements.

Mechanical Design and Kinematic Analysis of a Slider-Crank Mechanism

Kingston University London | 2026 | Siemens NX, ANSYS Workbench, Microsoft Excel

- Verified slider displacement, velocity and acceleration across a full operating cycle by correlating hand calculations with ANSYS rigid-body dynamics results.
- Produced a Siemens NX assembly and detailed drawings with GD&T and PMI, supported by engineering graphs and technical reports to communicate design intent for manufacture.

Robotic Arm for Pulse Oximetry Monitoring

Academic project | 2025 | Arduino, sensors, Bluetooth, mechanical actuation

- Built a working remote-monitoring prototype by integrating Arduino control, flex sensors, pulse-oximetry sensing, Bluetooth communication and mechanical actuation.
- Improved sensor placement and system reliability by testing mechanical positioning, signal response and overall functional behaviour.

EXPERIENCE AND LEADERSHIP

Co-Founder and Chief Marketing Officer | Aurelion Future Forge Pvt. Ltd.

Jul 2022 - Jun 2024 | Chennai, India / Hybrid

- Coordinated startup planning, stakeholder communication and cross-functional delivery across a two-year early-stage venture.

Community Coordinator | Impact CIT

Jul 2024 - Mar 2025 | Chennai, India

- Organised student and community initiatives, coordinating teams and deadlines across collaborative projects.

Head Designer | TEDx Chennai Institute of Technology

Dec 2023 - Mar 2024 | Hybrid

- Delivered event-branding work to fixed deadlines while coordinating with a multidisciplinary student team.

TRAINING

KUKA Robotics Training | Mitsubishi MELFA Industrial Automation Training | Ek Bharat Shreshtha Bharat Student Exchange Programme