

Venkata Hanuma Sai Teja T

Senior Manager – Mechanical Design | AMR R&D Leader | 3x U.S. Patents Pending | Aerospace Researcher & Author

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ABOUT

Senior Engineering Leader and Innovator with 8+ years' experience delivering AMRs, braking/drivetrain systems, thermal management solutions, and industrial automation equipment.

3 U.S. patents pending in AMR safety & automation systems.

Author of "The Sound of the Ocean" (poetry, pen name Sai Saketh Ram, Amazon).

Expert at leading cross-functional engineering teams, vendor partnerships, and translating R&D ideas into certified, market-ready products.

EXPERIENCE

ATI MOTORS

Senior Manager – Mechanical Design Oct 2023 – Present

- Lead AMR design strategy, vendor/manufacture coordination.
- Founded SkunkWorks R&D Wing (Nov 2024) for rapid innovation.
- Directed multiple patent-pending projects in AMR safety, drivetrain, braking.

Key Collaborations:

- Gremot Motors – 10" Hub Motor with high-fidelity encoder.
- Darpan Innovations – 12" Hub Motor.
- Torus Robotics – Axial flux motor.
- ArtPark, IISc – Harmonic drives for steering.
- Knott Vortex & Uitorq – EM brakes for AMRs.
- Karini Axles – EM brakes for Trans EV axles.

Lead Engineer – Mechanical Design & R&D Apr 2022 – Oct 2023

- Sherpa Tug V3 ISO 3691-1:2019 and IPx4 waterproof certification.
- Led conveyor & chute manufacturing (36 × 4m, 36 × 1.2m, 26 chutes).

Senior Engineer – Mechanical Design & R&D Apr 2019 – Apr 2022

- Design head for AMRs (P0 to Sherpa Tug V3).
- Innovations: caster system reducing steering motor size by 3x, 40+ kg battery swap.
- Led heatsink & water cooling designs for AMR motors.

Earlier Roles:

- Jed-i Fellow (2019), Intern – Jed-i (2016–2017)
- Intern – Technical Training & Research Centre (2014–2015)

PATENTS (PENDING)

- Universal Hitch with Load Cell to Detect Pull Force – 18/771,921 (Jul 12, 2024)
- Motion-Based Fail-Safe Braking for Trolleys – 18/771,793 (Jul 12, 2024)
- Auto Hitching a Trolley to a Vehicle Using an Image Sensor – 18/771,729 (Jul 12, 2024)

PUBLICATIONS

- The Sound of the Ocean – Poetry, pen name Sai Saketh Ram (Amazon)
- SCRAM Jet Engine Thermodynamic Analysis series – 3 peer-reviewed papers, 2016

SKILLS

- Mechanical Design
- CAD (Onshape, CATIA)
- FEA/CFD (SimScale, ANSYS)
- Thermal Systems
- Drivetrain/Brake Integration
- Vendor Management
- Product Certification
- R&D Leadership
- Robotics
- IP Development

EDUCATION

- MSc – Aerospace Engineering, Brunel University, London (2013)
- BE – Aeronautical Engineering, MVJ College of Engineering (2012) – 75%