Varsha Viswanadhan

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Professional Summary

Product-focused technology professional with 2+ years at Medtronic in regulated medical device environments and a Master's in Management of Technology and Innovation. Brings cross-functional, product-adjacent experience, complemented by a strong foundation in product discovery and commercialization.

Education

National University of Singapore (NUS), Singapore   August 2025 – July 2026

Master of Science - Management of Technology and Innovation - Product Management and Digital Strategy
- GPA: 4.9/5.0
- Coursework: Management of Technological Innovation, Digital Disruption and Technology Strategy, Marketing of Technology Products, Intellectual Property Management and Innovation Strategy, AI Management

Vellore Institute of Technology (VIT), India   July 2019 – April 2023

Bachelor of Technology - Electronics and Communication Engineering

Experience

Software Test Engineer, **Medtronic Engineering and Innovation Centre - India**   February 2023 - July 2025

Business Impact:
- Automation and Productivity: Identified bottlenecks in testing workflows and prioritized automation workflows, cutting manual testing effort by 40%.
- AI-Driven Quality Inspection Solution: Led validation for computer-vision-based anomaly detection in PEBAX liner tube inspection, reducing shipping returns and driving a 25% cost reduction.
- Clinical Safety and User Experience: Conceptualized and delivered an audio tone analysis system using CNNs, reducing surgeon overhead by 10% and enhancing patient safety.

Digital Adoption:
- AR/VR Lab Technical Consultant: Led deployment and adoption of AR/VR-based surgical training solutions for HUGO, MICRA and SIGNIA, translating clinical training needs into scalable digital experiences.
- Drove cross-functional alignment between clinical teams, engineers, and business stakeholders.

Leadership:
- Core Committee Member, WISE (Women in Science & Engineering): Led strategic planning and execution of diversity and innovation initiatives, including technical workshops and internal innovation challenges.

Skills

Strategic Partnerships & Business Development: Go-to-market strategy development, stakeholder management across C-suite and cross-functional teams, and competitive positioning.

Business & Financial Analysis: P&L analysis, financial modeling, ROI assessment, performance analytics, and valuation techniques (DCF, EV/EBITDA).

Intellectual Property & Innovation Strategy: Patent landscape analysis, IP portfolio assessment, freedom-to-operate evaluation, strategic IP positioning for competitive advantage and defensive protection.

Problem Solving: DMAIC, Business Process Re-engineering, design thinking, consulting-style problem structuring.

Technical Proficiency: Python (Pandas, NumPy, Matplotlib), Jira, Confluence, Power Automate, cross-functional collaboration.

Business and Strategy Projects

Strategic Industry & Product Analysis – GOOD Meat   November 2025

- Analyzed cultivated meat industry using disruptive innovation, technology adoption lifecycle, and Jobs-to-Be-Done frameworks to assess Good Meat's path to mainstream adoption.
- Developed strategic recommendations on cost reduction, regulatory positioning, IP protection, and ecosystem partnerships to enable long-term competitive advantage.

Corporate Valuation – Starbucks & Yum! Brands   November 2025

- Analyzed business model impact on valuation by contrasting Starbucks' asset-heavy expansion strategy with Yum!'s asset-light, franchised model and corresponding ROIC profiles.
- Performed sensitivity and peer-multiple validation (EV/EBITDA) to examine valuation robustness and identify key drivers influencing market pricing.

Intellectual Property Strategy Analysis – Garmin Ltd   November 2025

- Conducted a patent landscape analysis and analyzed patent scope, filing trends, and citation patterns to evaluate innovation focus and strategic positioning.
- Derived IP-driven strategic insights to support product differentiation, defensive positioning, and long-term innovation sustainability.

Go-to-Market Strategy – Airwheel SE3S/SE3SL   November 2025

- Developed a go-to-market strategy for Airwheel's smart ride-on luggage, repositioning the product from airline travel to high-speed rail–centric premium mobility.
- Built a data-backed marketing budget and KPI framework (awareness, engagement, conversion), aligning spend with industry benchmarks to support a 30% sales growth objective.

Technical and Applied AI Projects

Unsupervised Detection of Anomalies in MR Brain Images Using Cross-Correlation Encoder-Decoder GAN of Multivariate Time-Series   April 2023

- Engineered a CC-EDGAN framework for early brain tumor detection, achieving a 22.81% improvement in F1-score, while enhancing diagnostic accuracy by 26.61% in MAE and 15.40% in PSNR, advancing Multivariate Time Series analysis for medical imaging.

Online Transaction Fraud Detection on E-commerce websites using Machine Learning techniques   June 2022

- Detecting fraudulent transactions during real-time streaming using machine learning models such as SVM, KNN, AdaBoost and XG Boost. With AURAC, F1 score and accuracy, we also get to observe the detection rate and percentile of the fraud loss saved.

Courses and Certifications

- AWS Certified Cloud Practitioner (ID: AWS03125395)
- Machine Learning using Python - National Institute of Electronics and Information Technology (Govt. of India)

Publications

Das, I., Varsha, V., Srivastava, A., & Aparajeeta, J. (2025). *Unsupervised detection of anomalies in MR brain images using cross correlation encoder-decoder GAN of multivariate time-series*. In S. Dehuri, S. Dash, R. K. Thulasiram, & M. Favorskaya (Eds.), *Biologically inspired techniques in many criteria decision-making* (pp. 111–120). Springer. https://doi.org/10.1007/978-3-031-82706-8_12   2025