

# TIRUMALA KAGGUNDI

Director, Integrated Defence Staff | Department of Military Affairs | Ministry of Defence, Government of India

New Delhi, India | [tirumalakv@gmail.com](mailto:tirumalakv@gmail.com) | [linkedin.com/in/tirumalakv](https://www.linkedin.com/in/tirumalakv) | [indianwesterlies.substack.com](http://indianwesterlies.substack.com)

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## PROFILE

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Civil servant and former engineer with eighteen years of public-service experience spanning international trade policy, export administration, and defence. Currently serving as Director (Integrated Defence Staff) in the Department of Military Affairs, Ministry of Defence, working on jointness and integration across the Indian Armed Forces. Spent over fourteen years in the Indian Trade Service (DGFT), rising from Assistant Director to Joint Director General, where work spanned field administration, quasi-judicial adjudication, and the drafting of national trade policy, including the Foreign Trade Policy 2023. Began career as a design and simulation engineer in the aerospace and hydraulics industry, with stints at Airbus, Goodrich (now Collins Aerospace), Infosys, Eaton, and Wipro Fluid Power. Education includes a Master's in Computational Analysis and Public Policy from the University of Chicago's Harris School, with a focus on data science, statistics, and AI/ML applications to governance and an Executive MBA from Indian Institute of Foreign Trade, New Delhi in International Business. Writes on trade, economics, and Indian public policy at Indian Westerlies ([indianwesterlies.substack.com](http://indianwesterlies.substack.com)) and in national publications.

## CORE STRENGTHS

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- Trade policy formulation, export-promotion schemes, and trade finance/export credit policy
- Quasi-judicial adjudication, regulatory enforcement, and deep expertise in trade related litigation
- Data science, statistics, and applied machine learning for public policy
- Field administration, organisational performance, and large-team leadership
- Multilateral and bilateral negotiation (WTO, FTAs, export-control regimes)
- Engineering systems modelling and simulation (aerospace hydraulics, flight controls)

## PROFESSIONAL EXPERIENCE

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### Director, Integrated Defence Staff

*Apr 2025 – Present*

*Department of Military Affairs, Ministry of Defence, Government of India — New Delhi*

- Work on jointness and integration of the Indian Armed Forces, and on efforts towards theaterisation, within the Department of Military Affairs.
- Additional responsibilities are classified and not detailed here.

### Joint Director General of Foreign Trade (Director-level, NFSG)

*Feb 2022 – Mar 2025*

*Directorate General of Foreign Trade (DGFT), Ministry of Commerce and Industry — New Delhi*

- Contributed significantly to India's Foreign Trade Policy 2023 (released 1 April 2023); drafted the e-commerce policy and updated the duty exemption schemes.
- Introduced trade finance as an area of specialisation at Directorate General of Foreign Trade for policy focus.
- Administered duty exemption and remission schemes covering roughly USD 60 billion of India's annual exports, and managed schemes specific to the gems and jewellery sector.
- Led policymaking for the Interest Equalisation Scheme (IES), which subvents export credit interest costs for exporters at roughly Rs 2,400 crore per year, with enhanced benefits for MSME exporters; drafted the 2019-20 cabinet note and commissioned an evaluation study with IIM Kashipur.
- Worked with the Export Credit Guarantee Corporation, the Department of Financial Services, and the Department of Commerce on the formulation of the NIRVIK (Niryat Rin Vikas Yojana) scheme.
- Drove migration of the export-scheme service-delivery system from the legacy EDI platform to a new system developed by TCS, redesigning workflows for efficiency.
- Identified and worked to resolve structural issues constraining India's cross-border e-commerce exports under the new Foreign Trade Policy.

- Served as a contributing member of an inter-ministerial working group with the Department of Telecommunications that developed India's released standard/framework for assessing fairness in publicly deployed AI systems, a first standard of its kind in the world.

**Joint Director General of Foreign Trade (Deputy Secretary level, JAG)**

*Aug 2020 – Feb 2022*

*Directorate General of Foreign Trade, Ministry of Commerce and Industry — New Delhi*

- Continued in post while completing a fully-funded two-year Master's in Computational Analysis and Public Policy at the University of Chicago (2020–22); applied data science and policy-analytic training to trade-policy work on return.

**Deputy Director General of Foreign Trade (Under Secretary level)**

*Feb 2019 – Aug 2020*

*Directorate General of Foreign Trade, Ministry of Commerce and Industry — New Delhi*

- Worked across policy-making sections at DGFT headquarters on duty exemption and remission schemes, trade finance, and inter-departmental coordination on Foreign Trade Policy/GST integration.

**Deputy Director General of Foreign Trade — Head of Office**

*May 2017 – Feb 2019*

*DGFT Regional Authority, Ahmedabad, Gujarat*

- Headed a 50-person office with jurisdiction over 18 of Gujarat's 33 districts, a population of 35 million, and exports of roughly USD 10–15 billion per annum at that time.
- Heard and adjudicated 200+ cases under the Foreign Trade (Development and Regulation) Act in a quasi-judicial capacity; accelerated enforcement against defaulters, recovering over Rs 700 million in government revenue in a single year.
- Represented the Government of India in 35+ cases filed against DGFT before the Gujarat High Court, Karnataka High Court, and other forums.
- Chaired the Committee on Quality Complaints and Trade Disputes (CQCTD), resolving 18+ international trade disputes for regional exporters/importers, predominantly through consensus-based arbitration.
- Fed real-time field intelligence to headquarters that informed national policy tweaks following the rollout of the Goods and Services Tax (GST).
- Implemented a biometric attendance system and workflow optimisation that cut public-service delivery times by roughly 50% while reducing errors; resolved long-pending staff pay-fixation and career-progression issues; instituted a quarterly public-feedback survey.
- Served on Gujarat's State-Level Export Promotion Committee, contributing data analysis, inter-state policy comparisons, and WTO-compliance review that informed state industrial and export strategy (2017–18).
- Led an inter-ministerial delegation to Sri Lanka (March 2016) to resolve trade issues under the India–Sri Lanka Free Trade Agreement, and represented India on the Technical Working Group on the Wassenaar Arrangement export-control regime in Vienna (June 2018).
- Designed and delivered 12 “Niryat Bandhu” training programmes for 1,000+ new exporters (2017–18); launched a handholding initiative for small-scale and handicraft exporters, including Geographical-Indication-marked toy exports from Channapatna, Karnataka.

**Deputy Director General of Foreign Trade (2nd-in-command)**

*Aug 2013 – May 2017*

*DGFT Regional Authority, Bangalore, Karnataka*

- Served as deputy head of a 40-person office covering the whole of Karnataka — a population of 64 million and exports of roughly USD 19 billion per annum at that time.
- Conducted 28 Niryat Bandhu training programmes reaching 2,000+ new exporters; launched YouTube-based course content for budding exporters that has since grown to 1 million+ views and a 59,000+ subscriber base.
- Organised five thematic courses on anti-dumping and countervailing investigations, SPS/TBT measures under the WTO regime, and GST-related export procedures.
- Worked across customs, banks, the GST department, and inspection agencies to identify and resolve ease-of-doing-business pain points; served on the Regional Economic Intelligence Committee tracking trade fraud and money-laundering risk.

**Assistant Director General of Foreign Trade**

*May 2011 – Jul 2013*

*Indian Institute of Foreign Trade, New Delhi (probationary training) and DGFT Zonal Office, Chennai*

- Completed a year-long induction programme at the Indian Institute of Foreign Trade, New Delhi, earning an Executive Postgraduate Diploma in International Business (ranked 1st among 15 trainee officers).

- Served probationary term at the DGFT Zonal Office, Chennai, on export-licensing and field-administration duties.

## Earlier Career — Aerospace & Hydraulics Engineering (2002–2011)

### Engineer – Hydraulics, Airbus

Aug 2009 – Apr 2011

*Airbus — Bangalore, India; Toulouse, France; Bremen, Germany*

- Member of the system-simulation team for hydraulics and flight controls; key contributor to a virtual simulation model of the Airbus A330/A340 “iron bird”, a 1:1 test-bed used to study real-time flight-control characteristics.
- Worked across project sites in India, France, and Germany using MATLAB/Simulink and AMESim.

### Senior Engineer, Goodrich Actuation Systems (now Collins Aerospace/UTC Aerospace)

Mar – Jul 2009

*Bangalore, India*

### Senior Engineer, Infosys Technologies

Jan – Jul 2008

*Bangalore, India*

- Worked on system simulation and mathematical modelling, including nose-wheel-well-door repair manuals for the Boeing 787 programme and fan-cowl-door hydraulic-system modelling for the Airbus A350 XWB programme (MATLAB/Simulink).

### Senior Design Engineer, Eaton Corporation

Jun 2004 – Oct 2005

*Pune, India*

- Designed a global gear-pump series for tractor applications.

### Senior Engineer (R&D), Wipro Fluid Power Ltd (now Wipro Infrastructure)

Jul 2002 – May 2004

*Bangalore, India*

- Designed and developed truck hydraulic systems, hydraulic piston pumps, and valves; built validation test rigs; certified Green Belt in Six Sigma methodology.

## EDUCATION

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### Master of Science, Computational Analysis and Public Policy

*University of Chicago, Harris School of Public Policy — USA, 2020–2022*

- Coursework: investments for public policy, international financial policy, advanced statistics and program evaluation, financial statement analysis, microeconomics, analytical politics, data science, Python/R programming, AI/ML and advanced machine learning spanning courses from Harris School, Booth School of Business and Computer Science department.
- “Hacking for Defense” capstone: proposed a knowledge-management and cultural-continuity solution for the 91st Civil Affairs Battalion (US Army, AFRICOM), including an NLP-based tool for capturing tacit knowledge lost during deployment transitions. The solution was considered state of the art when proposed during 2021-22.

### Executive Postgraduate Diploma in International Business

*Indian Institute of Foreign Trade (IIFT), New Delhi — 2011–2012 · Ranked 1st among 15 trainee officers*

- Coursework: business and international economics, WTO and trade law, trade logistics, international trade operations, international business taxation, international financial management, and negotiations.

### Bachelor of Engineering, Mechanical Engineering

*Visveswaraya Technological University (Malnad College of Engineering, Hassan), Karnataka — 1998–2002 · First Class with Distinction · Ranked 3rd in the university among 3,000+ graduating mechanical engineers*

## HONORS & DISTINCTIONS

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- 2nd place, AI for Trade global competition, Center for Collective Learning (organised by Prof. César Hidalgo) — 2025 – used traditional machine learning pipeline to predict future trade for each HS6 lines, aggregated to HS4 level and achieved the best sMAPE score.
- Civil Services Examination, Union Public Service Commission of India (2008): All-India Rank 792 among ~325,000 candidates; allotted to the Indian Trade Service.
- Indian Engineering Services Examination (2006): All-India Rank 38 among ~30,000 mechanical-engineering applicants.

## CERTIFICATIONS & TRAINING

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- Advanced Trade Analytics Course, Indian Institute of Foreign Trade, New Delhi — 2023
- Financial Programming and Policies, Parts 1 & 2 (Macroeconomic Accounts; Program Design), International Monetary Fund — 2016
- The Trade Dimension in United Nations Development Assistance Frameworks, UNITAR — 2012
- Green Belt, Six Sigma methodology — 2003

## SELECTED DATA SCIENCE & POLICY PROJECTS

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- Machine learning model predicting sectoral outcomes of prospective Free Trade Agreements using gravity-model parameters and trade data (Python, scikit-learn); compared logistic regression, SVM, decision trees, and random forests — random forest performed best.
- Ride-share optimisation proof-of-concept: built a clustering algorithm in Python to identify optimal taxi pooling for regular commuters in Chicago from three months of trip data.
- Designed and built a food-inspection database web service for Chicago restaurants (Python, SQLite3, Bottle) ingesting JSON via POST, with indexing, Twitter-feed integration, and query handling.
- Contributing member, inter-ministerial working group (with Department of Telecommunications) that produced India's released framework for assessing fairness in publicly deployed AI systems.

## PUBLICATIONS & WRITING

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Writes regularly on trade, economics, and development through an India lens at [Indian Westerlies](http://indianwesterlies.substack.com) (indianwesterlies.substack.com).

- “Chinese Imports Into India: Analysing Strategic Measures To Enhance Self-Reliance”, Swarajya Magazine, May 2025
- “E-Commerce Exports: Unlocking The Potential Of India's MSME Sector In International Trade” Swarajya Magazine, March 2025
- “This Category in E-Commerce Can Fuel India’s Journey To \$1 Trillion in Exports”, Swarajya Magazine, March 2025
- “It’s Not Deglobalization, But Akamaisation — When Firms Go Local to Stay Global”, Swarajya Magazine, August 2020
- “A Weak Rupee Won’t Boost Our Exports”, The Hindu Business Line, July 2018
- “Mainstreaming Blockchains in Global Trade”, The Hindu Business Line, April 2018
- “Xiaomi Is Only Assembling Phones in India, But This Is How Manufacturing Ecosystems Are Built”, Swarajya Magazine, April 2018
- “Export Promotion in the Era of Trade Wars”, Swarajya Magazine, March 2018
- “Why Government’s Move to Protect Local Industries Is Right”, Swarajya Magazine, March 2018
- “For a Calibrated Approach to Reforms”, The Hindu Business Line, June 2017
- “Trade Is Great But It Creates Losers”, The Hindu Business Line, May 2017

## TECHNICAL SKILLS

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- Programming & Analysis: Python, R, SQL, MATLAB/Simulink, AMESim – now migrated to vibe coding
- Data Science: statistics, machine learning, NLP, program evaluation, data visualisation
- Domain Tools: WTO/FTA compliance analysis, trade-data systems, e-governance workflow design