

# Harsha Halgamuwe Hewage

PhD Candidate · Forecasting and Data Science Expert

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## Education

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### PhD in Forecasting and Data Science

Cardiff, UK

Cardiff University, UK

Sep 2023 – Sep 2026

- Recipient of WGSSS-ESRC Studentship Award
- Project focused on forecasting improvements to enhance reproductive health and family planning operations within global health supply chains, in collaboration with USAID
- Supervisors: Prof Bahman Rostami-Tabar, Prof Aris Syntetos, Dr Federico Liberatore, Glenn Milano (USAID)

### MSc in Social Science Research Methods

Cardiff, UK

Cardiff University, UK

Sep 2022 – Sep 2023

- Graduated with a Distinction
- Dissertation: Developing a long-term forecasting and simulation model for NHS workforce planning, in collaboration with NHS Wales

### MSc in Supply Chain and Data Science

Moratuwa, Sri Lanka

University of Moratuwa, Sri Lanka

Sep 2020 – July 2022

- Graduated with a Distinction
- Dissertation: Forecasting Retail Sales Across the Sales Promotion Life Cycle: A Machine Learning Framework

### BSc (Hons) in Transport and Logistics Management

Moratuwa, Sri Lanka

University of Moratuwa, Sri Lanka

Dec 2015 – Jan 2020

- First-Class Honours
- Logiwiz Award for Best Graduand in Supply Chain Management
- Sri Lanka Ports Authority Award for the Final Year Best Research Project
- Dissertation: Post-Promotional Effects and Judgmental Adjustments

## Teaching & Supervision

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### Graduate Tutor

Cardiff, UK

Cardiff Business School, UK

Sep. 2023 – Present

- Designed lab work materials and lesson plans for MSc-level courses on Forecasting and Business Analytics, utilizing R programming.
- Conducted lab sessions, assisted students with queries, and provided constructive feedback on their work.

### Lecturer (On Contract)

Colombo, Sri Lanka

Department of Transport and Logistics Management, University of Moratuwa, Sri Lanka

Dec. 2021 – Sep. 2022

- Designed lesson plans, lecture materials, assessments, and exam questions for BSc-level courses in Supply Chain, Information Technology, and Project Management.
- Collaborated on designing a short course for professionals on Strategic Supply Chain Management.
- Contributed to curriculum revision and the design of a new Master's program in Strategic Supply Chain Management.
- Served as an examiner on panels evaluating 4th-year undergraduate research projects.

### Visiting Lecturer

Colombo, Sri Lanka

Department of Transport and Logistics Management, University of Moratuwa, Sri Lanka

Mar. 2021 – Nov. 2021

- Developed lecture materials, assessments, and exam questions for the Principles of Supply Chain Management course.
- Provided detailed feedback to students, enhancing their understanding and performance.

### Visiting Lecturer

Peradeniya, Sri Lanka

Department of Operations Management, University of Peradeniya, Sri Lanka

Dec. 2021 – Apr. 2022

- Designed lecture materials for the ICT for Supply Chain Management course, covering technological applications in supply chains and business analysis principles.

### Visiting Instructor

Colombo, Sri Lanka

Department of Transport and Logistics Management, University of Moratuwa, Sri Lanka

Jan. 2020 – Jun. 2020

- Developed tutorial materials for the Communication Skills I course, focusing on enhancing student communication capabilities.
- Organized seminars and workshops to improve student communication skills and practical exposure.

## Work Experience

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### Research Assistant

Cardiff, UK

Cardiff University

Jan. 2024 – Jun. 2024

- Supported the development of a GPT Model for management consulting, coordinating data collection and role-play simulations.
- Organized and conducted 30 role-play sessions.
- Performed a literature review on AI applications in management consulting, contributing to the project's research foundation.

### IT Support Advisor

Cardiff, UK

Cardiff University

Sep. 2023 – Oct. 2023

- Provided professional and customer-focused IT support, resolving Wi-Fi and software-related issues for students and staff.
- Coordinated 2 IT clinics in student housing during the induction period, enhancing accessibility and technical readiness.
- Offered in-person assistance at the main IT clinic, troubleshooting Windows OS issues and guiding software installations.

### Finance Assistant

Cardiff, UK

Cardiff University

Mar. 2023 – Jul. 2023

- Processed 30+ expense claims per day, ensuring compliance with institutional policies and providing excellent customer service.
- Assisted customers in submitting claims through the system, addressing queries, and resolving issues promptly.
- Performed data entry, customer service, and query handling to maintain seamless operations.
- Ensured compliance by thoroughly checking claims submissions against institutional guidelines.

### Senior Business Analyst and Strategist

Colombo, Sri Lanka

Bridge Advisory and Consulting, Sri Lanka

Jun. 2021 – Dec. 2021

- Led projects in digitizing the agriculture sector, introducing e-payment solutions for transportation, and launching a centralized e-KYC platform for the financial sector.
- Contributed to the launch of a cryptocurrency exchange hub, providing strategic guidance and implementation support.

### Business Analyst

Colombo, Sri Lanka

ITX360 (Pvt) Ltd, Sri Lanka

Jun. 2020 – Jun. 2021

- Led a team of business analysts in delivering digital solutions for industries including retail, warehousing, healthcare, and e-commerce.
- Secured and managed three major projects, including an agriculture supply chain marketplace and an enterprise system for the national sports sector.
- Developed solution concepts, delivered solution pitches, authored functional documentation, and coordinated client communications to drive project success.
- Managed tender documentation processes, ensuring compliance and competitive positioning.

### Research Assistant

Colombo, Sri Lanka

University of Moratuwa, Sri Lanka

Feb. 2020 – Jun. 2020

- Prepared a comprehensive solution architecture for a digital marketplace system for a food company, aligning with business needs and scalability requirements.
- Collaborated with consultants to identify business improvement opportunities, leveraging technology to enhance client operations.

### Intern – Supply Chain Consulting

Colombo, Sri Lanka

KPMG Sri Lanka

Jun. 2018 – Dec. 2018

- Conducted comprehensive inventory audits by reconciling SAGE ERP system data with physical inventory, identifying discrepancies and optimizing data accuracy.
- Developed and implemented a Power BI dashboard to monitor key supply chain KPIs, improving decision-making efficiency.
- Evaluated supply chain processes and recommended improvement opportunities, enhancing operational efficiency for a retail client.
- Collaborated on a 5-year corporate plan for a government institution in the petroleum industry, contributing strategic insights and actionable recommendations.

## Scholarships & Grants

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Sep 2022 **Welsh Graduate School for the Social Sciences (WGSSS) Studentship Award**, Cardiff University, UK

Cardiff, UK

Dec 2024 **Taith Research Mobility Funding**, Cardiff University, UK

Cardiff, UK

June 2024 **International Institute of Forecasters Travel Grant**, International Institute of Forecasters

USA

Dec 2023 **Quarterly Forecasting Forum (QFF) Travel Grant**, IIF UK Chapter – International Institute of Forecasters

UK

Aug 2023 **NATCOR Bursaries / ORS Funding**, The Operational Research Society (The OR Society)

UK

## Honors & Awards

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June 2024	<b>Best Research Student Presentation</b> , ISF 2024: 44th International Symposium on Forecasting	<i>Dijon, France</i>
Aug 2022	<b>Best Research in Undergraduate Category</b> , 7th International Conference on Research for Transport and Logistics Industry (R4TLI) 2022	<i>Colombo, Sri Lanka</i>
Oct 2021	<b>Best Research in Supply Chain</b> , 6th International Conference on Research for Transport and Logistics Industry (R4TLI) 2021	<i>Colombo, Sri Lanka</i>
Jan 2021	<b>Logiwiz Award for the Best Graduand in Supply Chain Management</b> , Department of Transport and Logistics Management, University of Moratuwa	<i>Moratuwa, Sri Lanka</i>
Jan 2021	<b>SLPA Award for the Final Year Best Research Project in Transport and Logistics Management</b> , Department of Transport and Logistics Management, University of Moratuwa	<i>Moratuwa, Sri Lanka</i>
2016-2019	<b>Dean List</b> , Faculty of Engineering, University of Moratuwa	<i>Moratuwa, Sri Lanka</i>
Feb 2018	<b>1st Runners Up</b> , Unilever Challenge 2018	<i>Colombo, Sri Lanka</i>
Jan 2018	<b>Gavelier of the Year</b> , Gavel Club of University of Moratuwa, Toastmasters International	<i>Colombo, Sri Lanka</i>

## Selected Presentations

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<b>ISF 2024 : 44th International Symposium on Forecasting</b>	<i>Dijon, France</i>
<b>Presenter for "Enhancing Contraceptive Demand Forecasting: A Probabilistic Approach for Improved Family Planning Supply Chain Management"</b>	<i>June 2024</i>
<ul style="list-style-type: none"><li>Presented a probabilistic forecasting model to improve supply chain management for family planning.</li></ul>	
<b>NHS Wales Modelling Collaborative: General Conference 2023</b>	<i>Wales, UK</i>
<b>Presenter for "Developing a long-term forecasting and simulation model for mental healthcare workforce planning in the NHS"</b>	<i>Sep 2023</i>
<ul style="list-style-type: none"><li>Showcased a forecasting and simulation model tailored for NHS mental healthcare workforce planning.</li></ul>	
<b>IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) 2021</b>	<i>Singapore</i>
<b>Presenter for "Comparing Statistical and Machine Learning Methods for Sales Forecasting during the Post-Promotional Period"</b>	<i>Dec 2021</i>
<ul style="list-style-type: none"><li>Discussed comparative analysis of statistical versus machine learning methods for sales forecasting.</li></ul>	
<b>International Conference on Systems Engineering ICSEng 2021</b>	<i>Poland</i>
<b>Presenter for "Retail Sales Forecasting in the Presence of Promotional Periods"</b>	<i>Dec 2021</i>
<ul style="list-style-type: none"><li>Presented forecasting models accounting for sales fluctuations due to promotional periods.</li></ul>	

## Selected Publications

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<b>Forecast Adjustments During Post-Promotional Periods</b>	<i>2021</i>
<ul style="list-style-type: none"><li>Harsha Chamara Hewage, H Niles Perera, Shari De Baets</li><li>European Journal of Operational Research</li><li><a href="https://doi.org/10.1016/j.ejor.2021.07.057">https://doi.org/10.1016/j.ejor.2021.07.057</a></li></ul>	
<b>Enhancing Demand Forecasting in Retail: A Comprehensive Analysis of Sales Promotion Effects on the Entire Demand Life Cycle</b>	<i>Accepted</i>
<ul style="list-style-type: none"><li>Harsha Chamara Hewage, H. Niles Pererab, Kasun Bandara</li><li>Journal of Forecasting</li></ul>	
<b>A Novel Hybrid Approach to Contraceptive Demand Forecasting: Integrating Point Predictions with Probabilistic Distributions</b>	<i>Under review</i>
<ul style="list-style-type: none"><li>Harsha Chamara Hewage, Bahman Rostami-Tabar, Aris Syntetos, Federico Liberatore</li><li>International Journal of Production Research</li></ul>	
<b>A Hybrid Predictive and Prescriptive Modelling Framework for Long-term Mental Healthcare Workforce Planning</b>	<i>Under review</i>
<ul style="list-style-type: none"><li>Harsha Chamara Hewage, Bahman Rostami-Tabar</li><li>Journal of Service Research</li><li><a href="https://doi.org/10.48550/arXiv.2406.17463">https://doi.org/10.48550/arXiv.2406.17463</a></li></ul>	

- P.T.R.S. Sugathadasa, H. Niles Perera, Harsha Chamara Hewage, S.P.A.V.S. Samarakoon
- Sri Lankan Journal of Agriculture and Ecosystems
- DOI: 10.4038/sljae.v3i1.62

## Professional Affiliations

Active	<b>Student Member</b> , The Operational Research Society (The OR Society)   Credential ID: 11735	UK
Active	<b>Student Member</b> , International Institute of Forecasters   Credential ID: 11735	USA
Active	<b>Member (MILT)</b> , The Chartered Institute of Logistics and Transport   Credential: 51637	Sri Lanka
Active	<b>Reviewer</b> , The Operational Research Society (The OR Society)	UK
2023	<b>Reviewer</b> , R4TLI 2023: Research for Transport and Logistics Industry, Society of Transport and Logistics	Sri Lanka
2023	<b>Reviewer</b> , Moratuwa Engineering Research Conference 2023 (MERCon 2023, University of Moratuwa)	Sri Lanka

## Organizations & Volunteering

### Coordinator and Training Lead

Cardiff, UK

#### Data Lab for Social Good, Cardiff Business School

Sep 2023 – Present

- Organized training sessions for PhD students by identifying their needs; organized 5 sessions to date and co-developed a training on Introduction to Python.
- Coordinated overall activities of the group.

### Research Network Lead

Cardiff, UK

#### Forecasting for Social Good (F4SG), International Institute of Forecasters

Dec 2021 – Present

- Found resource people to deliver free workshops on forecasting methodologies using R and Python; organized 10 sessions.
- Managed the LinkedIn page by designing flyers and content; handled the email account.

### Student Representative, Year 2 Business Management PhD Cohort

Cardiff, UK

#### Cardiff Business School

Sep 2024 – Present

- Collecting student feedback and concerns from the cohort.
- Representing the cohort at student-staff meetings and advocating on their behalf.
- Sharing feedback and serving as a liaison between students and staff.

### Mentor

Cardiff, UK

#### Cardiff Business School Peer Mentoring Scheme

Nov 2024 – Present

- Mentoring two first-year PhD students on academic and professional development, covering: time management, writing skills, publishing, networking, teaching, and career planning.
- Conducting quarterly meetings to provide guidance and monitor progress.

### Student Volunteer – Organising Team

Dijon, France

#### 44th International Symposium on Forecasting, Dijon, France | International Institute of Forecasters

Mar 2023 – Sep 2023

- Helped the organization team at the registration desk, managing the registration process of 450+ participants.

### Co-organizer – Forecasting Stream

Cardiff, UK

#### Annual Conference OR65, The Operational Research Society

Mar 2023 – Sep 2023

- Helped organize the forecasting stream by creating social media flyers and reviewing the abstracts received.

### President

Moratuwa, Sri Lanka

#### Gavel Club of University of Moratuwa, Toastmasters International

Feb 2019 – Jan 2020

- Managed and coordinated the club.
- Revised the constitution of the club introducing a new club structure where young students get more chances to get board positions.
- Coordinated sponsorships and finances of the club.
- Coordinated the wellbeing of the club members.

## Skills & Expertise

<b>Expertise</b>	Time Series Forecasting, Data Science, Supply Chain Optimization, Business Strategy, Social Media Content Strategy
<b>Programming</b>	Python, R
<b>Reporting</b>	Quarto, Shiny, Power BI, Tableau
<b>Creative Design</b>	Adobe Illustrator, CorelDRAW, Microsoft PowerPoint
<b>Languages</b>	English (Fluent), Sinhala (Native)

References upon request