

Chamil Oshan Abeysekara

Industrial AI & Robotics | Edge/Applied ML | Predictive Maintenance & ERP | Digitalization
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Work authorization: Austria (student residence). Open to relocation.

PROFILE

Engineer and researcher specializing in **industrial AI, robotics, and edge/embedded ML**. Blend of hands-on robotics (**ROS, IoT, PLC**), software/data (**Python, C/C++, SQL**), and business expertise (**MBA, ERP** at scale). Proven track record in delivering **predictive maintenance** systems, **ERP** solutions, and **ROS**-based applications with measurable impact.

KEY ACHIEVEMENTS

- **Predictive Maintenance:** Built AI pipeline for *Bielomatik* machines; enabled early-failure detection and **reduced annual costs by ~EUR 21,300**.
- **ERP Delivery at Scale:** Delivered IFS across **asset/service/supply chain** domains for Benelux clients; end-to-end lifecycle with custom **SQL** reporting and user enablement.
- **Edge/Robotics R&D:** Contributed to Robot Competitions (navigation, HRI, manipulation) and EU-funded *AfroTrans* teaching/research assets.
- **ERP Support Excellence:** Managed **300+** ERP support cases across North American & European clients; improved first-call resolution through targeted training.

WORK EXPERIENCE

University of Klagenfurt — Transportation Informatics Group Austria | Feb 2025 – Present
STUDENT RESEARCH ASSISTANT

- Conduct research on **autoencoders, discrete cellular neural networks (dCeNN), extreme learning machines (ELM), CNNs, and rule-based heuristics (ASP)** with a focus on **edge computing optimization**.
- Design and deliver lecture/practical content for EU-funded *AfroTrans* on transport research & analytics.
- Build reusable assets (datasets, notebooks, **ROS** demos) to accelerate lab adoption and reproducibility.

12Guide Sri Lanka / 12Guide Consulting B.V. (IFS Partner) Sri Lanka / Remote | Apr 2023 – Sep 2024
IFS ERP CONSULTANT

- Delivered **IFS Cloud** across **asset management, service, and supply chain**; collaborated with Benelux stakeholders from discovery to post-go-live.
- Led **customized implementation of the IFS Scope Tool** (proprietary business value engineering tool) during design & discovery to deliver tailored, value-driven solutions.
- Delivered user training & documentation, improving ERP adoption and reducing support escalations.

IFS Sri Lanka Sri Lanka | May 2021 – Mar 2023
CONSULTANT — BUSINESS APPLICATIONS

- Delivered ERP consulting services for international clients including *Emirates, Lockheed Martin, and Schoeller Allibert*.
- Delivered remote training (*IFS Academy*) for North American users; improved competency and first-call resolution.
- Handled **300+ support cases** for North American & European clients, covering fleet, asset management, and supply chain modules.
- Collaborated with cross-functional teams on testing & rollout; authored **SQL** reports and configuration artifacts.

MAS Intimates — MAS Holdings (Central Autonomation Team) Sri Lanka | Jun 2019 – Dec 2019
INTERN — AUTONOMATION

- Prototyped **Machine Vision & IoT** solutions (**Python, C++**); integrated with factory processes.
- Developed embedded/PLC components (MCU firmware, PCB design; ADCs, PLL, simulation) to industrial standards.
- Executed plant-level installation & troubleshooting, accelerating feedback loops for production teams.

SELECTED PROJECTS

Predictive Maintenance Model Using AI — Atlas Axillia Co.

Sri Lanka | Feb 2020 – Jan 2021

INDUSTRY PROJECT

- Built end-to-end PM pipeline: data ingestion → feature extraction → anomaly scoring using **PCA + Mahalanobis**.
- Tech: **Python**, **TensorFlow**, scikit-learn, PLC; dashboarded telemetry to enable **real-time** monitoring.
- Outcome: earlier fault detection and optimized maintenance schedule; ~**EUR 21,300 annually** saved.

RoboCup@Home — Autonomous Service Robotics

Austria | Oct 2024 – Apr 2025

RESEARCH PROJECT

- Implemented **ROS**-based capabilities for Human-Robot Interaction, navigation, and manipulation; contributed to competition stack.
- Collaborated in an interdisciplinary team; emphasized reproducible experiments and clean documentation.

MBA Dissertation — Asset Management Optimization (AI & ERP)

| Mar 2023 – May 2023

ACADEMIC PROJECT

- Assessed opportunities to integrate **AI/data science** with ERP for energy, maintenance, and resilience gains.
- Produced actionable recommendations for manufacturing contexts; informed pilots for compliance & sustainability.

SKILLS

Programming & ML: Python, C, C++, C#, SQL, MATLAB, scikit-learn, TensorFlow

Robotics & Edge: ROS, Raspberry Pi, Jetson Nano, Arduino, IoT, PLC

ERP & Business: IFS Applications, IFS Cloud, IFS Scope Tool, SQL reporting, ERP rollout

Electronics & CAD: PCB design, LTSpice, Proteus; SolidWorks, AutoCAD, Autodesk Fusion 360, Altium

Languages: English (Full professional), German A1 (Grundkenntnisse), Sinhala (Native)

EDUCATION

University of Klagenfurt, Austria

Mar 2024 – Present

MSc — Information & Communications Engineering (Autonomous Systems & Robotics)

University of Bedfordshire, UK

2022 – 2023

Master of Business Administration (General)

General Sir John Kotelawala Defence University, Sri Lanka

2017 – 2020

BSc (Hons) in Mechatronic Engineering

PUBLICATIONS

- Enhancing Image Quality via Deep Autoencoder Architectures for Single Image Super-Resolution.**
CSCC 2025: International Conference on Circuits, Systems, Communications and Computers, Italy. Presented; pending publication.

CERTIFICATIONS

- Deep Learning Specialization** — Deeplearning.AI (Coursera). *Credential ID: DMA29FDCG94B*
- TensorFlow Developer Specialization** — Deeplearning.AI (Coursera). *Credential ID: JKW3657Y42GW*
- Embedding Sensors & Motors Specialization** — University of Colorado Boulder (Coursera). *Credential ID: JBSLNXFTJL99*
- Sensors and Sensor Circuit Design** — University of Colorado Boulder (Coursera). *Credential ID: A48LDTWSCDUW*
- Advanced Training in Data Analysis** — AdTrans Erasmus+ project. 2025

LEADERSHIP & MEMBERSHIPS

- Coordinator, Electronic Robotics & Innovation Club — KDU (2018–2019)
- Elected Committee Member, Mechanical Engineering Students’ Society — KDU (2018–2019)

COMPETITIONS

- Group Leader — Finalist, ROBORAVE 2018 — KDU
- Group Leader — Successful Participant, ROBOFEST 2018 — SLIIT