

## Yovin Ransika Yahathugoda

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LinkedIn Profile - <https://www.linkedin.com/in/yovin-yahathugoda/> | Digital Portfolio - <https://www.yovinyahathugoda.com/>

Kaggle Profile - <https://www.kaggle.com/yovinyahathugoda/competitions>

GitHub Profile - <https://github.com/yoviny/Deep-learning-Competitions>

## Professional experience

**Roche Products Limited**, United Kingdom

20/06/2022 – Present

IT Data Scientist Industrial Placement

- Developed and deployed dashboards for data visualisation and data query applications using RS Connect.
- Collaborating as a team to implement a federated learning architecture for unifying Multiple Sclerosis segmentation algorithms (**PyTorch**, **TensorFlow**, Matlab, ONNX) from different sites for 3D MRI images.
- Implemented a solution to enable reusability of solutions for countries using unsupervised algorithms (clustering).
- Leveraged **NLP** and Graph models (Neo4J & NetworkX) for predicting clinical study similarity and missing NCT ID's.
- Devised a PDF parsing pipeline to extract information from drug protocol documents using OCR and NLP and storing in a semi-structured format in Snowflake.
- Writing **reproducible code** and ensuring it is stored according to standard using **version control** and GitLab.
- Collaborated as a team based on **Agile** Framework to produce Minimum Viable Products (MVP) or Proof-of-Concept (PoC) products with existing data sources using **Python** and **machine learning**.

**Self-Employed**, Sri Lanka

20/12/2019 – 19/08/2021

Freelance Computer Vision Engineer

- Full-time Kaggle participant involved in Data Science and Deep Learning competitions in areas such as medical imaging and Optical Character recognition (OCR). A selection of completed projects are showcased in my digital portfolio.
- Developed a custom U-Net model ranking in the **top 16%** for detecting functional tissue units (FTUs) in Kidney biopsies.
- Implemented a custom ResNeXt model with CutMix augmentation for OCR of Bengali handwritten characters and achieved a leader board ranking in the **top 3%** (59<sup>th</sup> out of 2059 participants).
- Developed a visual based fabric width inspection system as a prototype for a textile manufacturer in Sri Lanka.

**John Keells Research (A division of John Keells Holdings PLC)**, Sri Lanka

02/04/2018 – 30/11/2019

Research Engineer

- Devised an imaging system for multispectral imaging by developing the electronic design and program code.
- Analysed multispectral images using image processing techniques to detect hidden details of the target object.
- Reduced 3D print failures up to **40%** by upgrading existing 3D printer with new hardware and re-programmed firmware.
- Collaborated in team discussions focused on developing novel ideas with a market potential and performed prior art searches for the research project.

**Sri Lanka Ports Authority**, Colombo, Sri Lanka

07/11/2016 - 29/01/2017

Engineering Intern - (Part of the industrial training required for the undergraduate degree)

- Diagnosing faulty networks inside the Colombo Port and supervising network cable repair jobs.
- Upgraded communication line between Engine room and control room of a Tugboat.

## Education

**MSc Data Science (Expected Grade – Distinction)**

09/2021– Ongoing

Nottingham Trent University, UK

Received a **25% scholarship** and additional **£3,000 bursary** for previous academic performance.

Key modules: Software Engineering, Statistical Data Analysis and Visualisation, Applied AI and Data Mining, Deriving Business Value from Data Analytics, and Fundamentals of Big Data and its Infrastructure.

**BEng (Hons) Electronic Engineering - 1st Class Honours (74.31%)**

09/2014 – 01/2018

Sheffield Hallam University, UK

- Thesis title: Navigation System to Assist the Visually Impaired using Stereo Vision and Audio Feedback - This included Computer Vision and Machine Learning using Python, OpenCV and LIBSVM.

## Core Competencies

**Programming** - Python, C, C#, C++, OpenCV, Git, PyTorch, TensorFlow, Jupyter, Pandas, R, Linux, NetworkX, Neo4J, Streamlit

**Software** – Eagle PCB, OrCAD, Matlab, Arduino, Visual Studio, Microsoft Office Suite, R Studio

**Languages** – English (Fluent) & Sinhala (Native)

### Transferrable skills

- **Communication** - Successfully defending presentations during external investor meetings at John Keells Research and during presentations throughout undergraduate and postgraduate studies. Presenting technical presentations to product owners and collaborating in brainstorming sessions at Roche.
- **Time management** – Committed to meeting deadlines and achieving weekly objectives in multiple projects by prioritising workloads while working as a Research Engineer at JKR and during the placement at Roche.
- **Leadership** – Organised workshops and events while serving as the President of Aeronautical Club in Secondary School. Managing team members in undergraduate group projects as group leader to ensure all work is completed. Served as batch representative in the final year of undergraduate studies. Brainstormed and hosted Data Science hackathons/activities by collaborating with peers for Roche Advanced Analytics Network (RAAN).
- **Project management** - Identified and procured equipment and components required for the research project at John Keells Research.
- **Problem Solving/Critical Thinking** – Providing solutions to problems faced while working on novel research projects and meet strict deadlines while working at John Keells Research. Thinking out of the box to solve novel problems and improve business processes during the placement.

## Memberships

**Institution of Engineering and Technology (IET)** – Member (MIET)

**2018 - Present**

**Institute of Electrical and Electronics Engineers (IEEE)** - Member

**2016 – Present**

## Certifications

[Azure Data Fundamentals](#) – Microsoft

**14/01/2022**

[Big Data Specialisation](#) - University of California San Diego

**03/05/2020**

[Deep Learning Specialisation](#) - By Andrew Ng

**08/01/2020**

[DL0101EN: Deep Learning Fundamentals with Keras](#) - IBM

**30/11/2019**

[PH125.8x: Data Science: Machine Learning](#) - HarvardX

**27/11/2019**

## Interests & Achievements

### AI/Deep Learning competitions

- Ranked in the **top 3%** (59<sup>th</sup> out of 2059 participants) of the [Bengali handwritten classification](#) challenge hosted on Kaggle.

### Extra-Curricular Activities

- Volunteering – John Keells Foundation (CSR), Buddhist Society of Lyceum International School Nugegoda
- President of Aeronautical Club at Lyceum International School Nugegoda.
- Shortlisted in two categories in the [Astronomy Photographer of Year 2021](#) competition hosted by Royal Museums Greenwich, UK. Nominated for the People's Choice Award in the same competition.

## References

References available upon request.