

# 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**, United Kingdom

20/06/2022 – Present

### Data Scientist Industrial Placement

- 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. Personal contribution included algorithm testing, data curation and building pipelines.
- 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.
- Implemented 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**.
- Developed and deployed dashboards for data visualisation and data query applications using RS Connect.
- Organised and hosted workshops and hackathons in relation to data science.

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

02/04/2018 – 30/11/2019

### Research Engineer (Computer Vision & Electronics)

- Detection of microbial colonies using an ML classifier and segmenting colonies for surface area calculation.
- Analysed multispectral images using **image processing** to detect hidden stress fractures in wind turbine blades.
- Implemented a 3D printing monitoring system using **computer vision** to detect a 3D print failure.
- Collaborated in team discussions focused on developing novel ideas with a market potential by performing prior art searches and testing feasibility of ideas by building proof-of-concept products.

## Education

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

09/2021– 10/2023

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.

MSc thesis

10/2022 - Present

Focusing on developing a novel approach to combine knowledge graphs with transformer-based language models specialising in the financial domain.

**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, PyTorch, Linux, Pandas, OpenCV, Git, Jupyter, TensorFlow, C, C#, C++, Streamlit, R, NetworkX

**Software** – Microsoft Office Suite, Visual Studio, Arduino, Eagle PCB, OrCAD, R Studio, Matlab, Neo4J

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

## Transferrable skills

- **Communication** – Explaining technical presentations in a simple and concise manner allowing non-technical team members to understand. Collaborating in brainstorming sessions at Roche and presenting at Data Science workshops.
- **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** – Brainstormed and hosted data science hackathons/activities by collaborating with peers for Roche Advanced Analytics Network (RAAN). Managing team members in postgraduate and undergraduate group projects as group leader to ensure all work is completed by meeting deadlines. Served as batch representative in the final year of undergraduate studies.
- **Project management** - Identified and procured equipment and components required for the research project at John Keells Research.
- **Problem Solving/Critical Thinking** – Thinking outside the box to solve novel problems and improve business processes during the placement. Providing solutions to problems faced while working on novel research projects at John Keells Research.

## Deep Learning Projects Achievements

- Full-time Kaggle participant involved in Data Science and Deep Learning competitions in areas such as medical imaging between December 2019 to August 2021.
- 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 custom U-Net model ranking in the **top 16%** for detecting functional tissue units (FTUs) in Kidney biopsies.

## Memberships

Institution of Engineering and Technology (IET) – Member (MIET)	2018 - Present
Institute of Electrical and Electronics Engineers (IEEE) - Member	2016 – Present

## Certifications

<a href="#">Azure Data Fundamentals</a> – Microsoft	14/01/2022
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## Courses

<a href="#">Big Data Specialisation</a> - University of California San Diego	03/05/2020
<a href="#">Deep Learning Specialisation</a> - By Andrew Ng	08/01/2020
<a href="#">DL0101EN: Deep Learning Fundamentals with Keras</a> - IBM	30/11/2019
<a href="#">PH125.8x: Data Science: Machine Learning</a> - HarvardX	27/11/2019

## Interests & Achievements

### 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.