

Yovin Ransika Yahathugoda

Welwyn Garden City, AL7 2DL, United Kingdom

Mobile: +44 7932614336 | Email: yovin.yahathugoda@gmail.com

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**, **MONAI**, Matlab, **ONNX**) from different sites for 3D MRI images. Personal contribution included algorithm testing, data curation and building pipelines.
- Designed a hackathon for evaluating technical capabilities of vendors by implementing and testing technical tasks including **DICOM image processing**, model training, inference, and deployment for vendors to replicate.
- Writing DICOM to Nifti conversion scripts using Python and **SimpleITK** for data stored in **Flywheel** for data standardisation for ingestion by Unet-based models and testing orientation and header information validity.
- 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 (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

Focused on developing a novel approach to combine knowledge graphs with transformer-based language models specialising in the financial domain. Currently in the process of writing a Q1 journal submission for the work done during the thesis.

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, MONAI, 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** – Connecting with stakeholders to identify problems and working closely with diverse teams to plan and achieve objectives efficiently such as contributing to a RfP (Request for Proposal) process. 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%** (59th 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

Institute of Electrical and Electronics Engineers (IEEE) - Member

2016 – Present

Certifications

[Azure Data Fundamentals](#) – Microsoft

14/01/2022

Courses

[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

Extra-Curricular Activities

- Volunteering – John Keells Foundation (CSR)
- President of the Aeronautical Club at school.
- Shortlisted in two categories in the [Astronomy Photographer of Year 2021](#) & [2023](#) competition hosted by Royal Museums Greenwich, UK. Nominated for the People's Choice Award in the same competition for 2021.

References

Additional References available upon request.