

# VARUN GURUPURANDAR

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## SUMMARY

Master's student in Data Science and Information Engineering with strong programming skills in Python and hands-on experience applying advanced machine learning techniques, including convolutional neural networks, transfer learning, and object detection. Skilled in deploying ML solutions with frameworks such as PyTorch, TensorFlow, and scikit-learn. Experienced in collaborative projects with Git/GitHub and containerized ML applications. Background in IoT and edge computing, with published IEEE research papers in deep learning applications.

## EDUCATION

### Masters in Data Science and Information Engineering (09/2024 - present)

Linköping University, Sweden

**Studying 3<sup>rd</sup> Semester , will be ready to start Master Thesis Project / Internship by February-2026**

Master Coursework: Machine learning, Natural Language Processing, Statistics

Project : Analyzing and Mitigating Fairness Issues in NLP Models

- Investigated bias detection in NLP models using the Jigsaw Unintended Bias in Toxicity Classification dataset, focusing on political and gender-related biases through established fairness metrics.
- Applied data augmentation as a mitigation strategy, demonstrating measurable reduction of bias and improving model fairness and reliability in toxicity classification

### Bachelors in Artificial Intelligence and Machine Learning (06/2020 – 07/2024)

Visvesvaraya Technological University (VTU), India

Project 1: IoT-Driven Temperature Data Analysis and Linear Regression for Enhanced Exploration (03/2022 - 08/2022)

- Implemented and configured IoT devices for real-time temperature data collection. Conducted exploratory data analysis (EDA) to identify patterns and trends using data processing tools such as Pandas, NumPy,
- Performed statistical modeling with sci-kit-learn for linear regression. Published an IEEE paper in an international conference.  
[IEEE International Conference on Data Science and Network Security \(ICDSNS-2023\), India, 2023,](#)

Project 2: Exploring the Cosmos with Machine Learning: Advancements in Astronomical Data Processing. (11/2023 -04/2024)

- Our research on astronomical object classification employs a Recursive Convolutional Neural Network (RCNN) to enhance the systematic categorization of celestial phenomena. Utilizing a dataset of 16,697 images of stars, galaxies, and other celestial objects.
- The RCNN integrates region proposals with deep convolutional networks to learn and distinguish complex patterns across object categories. Achieving an accuracy of 93.83%, our model underscores the potential of deep learning in automating classification tasks and advancing cosmic knowledge. This work was published in IEEE international conference.  
[2024 Second International Conference on Data Science and Information System \(ICDSIS\), Hassan, India, 2024.](#)

## PROFESSIONAL EXPERIENCE

### EGNYTE , India Engineering Internship (08/2023-10/2023)

- Acquired good knowledge of machine learning frameworks, including PyTorch, TensorFlow, and Keras, with a strong focus on efficient API design and development.
- Gained hands-on experience with FastAPI for building high-performance APIs and Docker for containerization, enabling scalable and deployable machine learning solutions.
- Collaborated in a team setting with Git/GitHub for version control and CI/CD pipelines.

## TECHNICAL SKILLS

**Programming Languages:** Python , R , C, Java.

**Tools:** Docker, Postman, Git , GitHub, PowerBI.

**Operating systems:** Windows, Linux (VM).

**Database:** SQL , PostgreSQL

**Environment:** Visual Studio ,PyCharm,Android Studio,Anaconda, RStudio

**Domains Interested:** Machine Learning, Artificial Intelligence, Data Science, DevOps, Software engineering