

# Abhishek Ramanathapura Satyanarayana

(+31) 687353503, Groningen, The Netherlands

**Email:** abhishek.r.satyanarayana.4@gmail.com

**GitHub:** <https://github.com/AbhishekRS4/> **HuggingFace:** <https://huggingface.co/abhishekr4>

**Personal Website:** <https://abhishekr4.github.io/> **LinkedIn:** <https://linkedin.com/in/abhishek-r-s/>



## ABOUT ME

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I am a graduate Artificial Intelligence (AI) Engineer from the University of Groningen. I am a motivated, talented, hardworking, and fast-learning professional. I am interested in a role in the field of AI with a long-term goal of contributing towards improving the various aspects of human lives and the environment through continuous development and deployment of AI applications that can have a significant impact on the real world. My hobbies are playing chess and badminton, listening to music, watching technology videos, and going for walks.

## EDUCATION

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- **M.Sc. in Artificial Intelligence** Groningen, The Netherlands  
*University of Groningen [RUG]* Sep 2021 - Oct 2023
  - **Thesis:** For my AI Master's thesis I worked on a research project titled **Enhancing depth estimation for Transparent objects**. In this research, we proposed a novel encoder-decoder architecture that outperformed the state-of-the-art method.
  - **Relevant Courses:** Machine Learning, Deep Learning, Pattern Recognition, Handwriting Recognition, Cognitive Robotics, Robotics for AI, Computer Vision, Natural Language Processing, Deep Reinforcement Learning, Intro to Data Science.
  - **Grade:** GPA: 8.3/10, Thesis: 8.5/10
- **Honours Master's in High Tech Systems and Materials (HTSM)** Groningen, The Netherlands  
*Honours College, University of Groningen* Nov 2021 - Jun 2023
  - **Masterwork:** For my HTSM Masterwork, I worked on a research project titled **Oil Spill Segmentation using Deep Encoder-Decoder models**. In this project, we developed and evaluated the performance of popular deep encoder-decoder models for the oil spill segmentation task. The best-performing model has also been deployed to HuggingFace.
  - **Grade:** GPA: 7.9/10, Masterwork: 9/10
- **B.Tech. in Information Technology** Surathkal, Mangaluru, India  
*National Institute of Technology Karnataka [NITK]* Jul 2012 - May 2016
  - **Grade:** CGPA: 8.3/10

## EXPERIENCE

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- **Teaching Assistant (Part-time)** Groningen, The Netherlands  
*Faculty of Science and Engineering (FSE), University of Groningen* May 2023 - Jun 2023
  - **Responsibilities:** I worked as a TA for *Handwriting Recognition* course during which I monitored the weekly lab sessions, mentored some teams regarding their progress in the course project and graded the course projects.
  - **Skills:** Teamwork, Teaching, Time management, Communication, Python.
- **Teaching Assistant (Part-time)** Groningen, The Netherlands  
*Faculty of Science and Engineering (FSE), University of Groningen* Feb 2023 - Apr 2023
  - **Responsibilities:** I worked as a TA for *Deep Learning* and *Computer Vision* courses. I monitored the weekly lab sessions and graded assignments for both courses. I also invigilated the exam for the Deep Learning course.
  - **Skills:** Teamwork, Teaching, Time management, Communication, Python, Matlab.
- **Teaching Assistant (Part-time)** Groningen, The Netherlands  
*Faculty of Science and Engineering (FSE), University of Groningen* Sep 2022 - Nov 2022
  - **Responsibilities:** I worked as a TA for *Cognitive Robotics* and *Introduction to Data Science* courses during which I monitored the weekly lab sessions and graded assignments for both courses. I graded the course projects for the Cognitive Robotics course. For the Introduction to Data Science course, I invigilated the course exam, gave a presentation to the students on using Git and GitLab for course assignments, and maintained the GitLab assignment repositories for the teams.
  - **Skills:** Teamwork, Teaching, Time management, Leadership, Communication, Presentation, Python, Git, GitLab.
- **Summer AI Intern** IJmuiden, The Netherlands  
*Tata Steel in Europe* Jul 2022 - Aug 2022
  - **Responsibilities:** I took part in this summer internship as a part of the Dutch Summer of AI, edition 2022. I worked on supervised and unsupervised deep learning methods to classify and cluster images with steel surface defects. For the unsupervised task, I worked on a model as a proof of concept. For the supervised steel surface defect classification task, I worked on developing a production-ready AI model that achieved a 92% accuracy. When deployed, this model would save at least 500K Euros annually for Tata Steel. Our team won the award for **Solving the Most Valuable Problem**.

- **Skills:** Teamwork, Time management, Communication, Presentation, Python, GitLab, Microsoft Azure, MLFlow.

### Teaching Assistant (Part-time)

Groningen, The Netherlands

University Medical Center Groningen (UMCG), University of Groningen

Jun 2022 - Jul 2022

- **Responsibilities:** I worked as a TA for the Summer School Data Science and AI in Health. I was responsible for making sure that the assignment notebooks did not have any issues. I monitored and helped the students during the summer school.
- **Skills:** Communication, Leadership, Time management, Python, Jupyter.

### Internship (Part-time)

Drachten, The Netherlands

Philips Consumer Lifestyle B.V.

Nov 2021 - Jul 2022

- **Responsibilities:** For this internship, I worked as a part of an Honours Master's in HTSM. I was in a team in which we worked on a **report outlining different ways of developing a sustainable shaver by reducing the carbon footprint of one of the Philips shaver models**. We presented the top 5 ways of reducing the carbon footprint of the shaver. When some of our proposals are implemented, the carbon footprint of the shaver can be reduced by 16.6% to 35% depending on the choice.
- **Skills:** Teamwork, Time management, Communication, Presentation.

### Research Associate (Machine Learning) in Autonomy

Bengaluru, India

Ati Motors

Sep 2017 - Jun 2021

- **Responsibilities:** I worked mostly on research, prototyping, development, and deployment of Machine Learning, Deep Learning, Computer Vision, Robot Perception, and miscellaneous Algorithm solutions for autonomous cargo vehicles. In the learning algorithms, I worked mostly on object classification, object detection, and semantic segmentation in 2D images; and semantic segmentation in 3D LiDAR point cloud data. I also worked on benchmarking various ML models on multiple target hardware devices such as Nvidia's GPUs, Intel Movidius stick, and Nvidia Xavier embedded development board. I also worked on the development, deployment, and testing of LiDAR and camera sensor drivers, and raw and derived sensor data pipelines. I was also actively involved in support operations such as showcasing more than 15 demos at potential customer sites and successful deployment activities at 3 customer sites.
- **Skills:** Communication, Teamwork, Time management, Leadership, Linux, Docker, Git, GitHub, Python, Jupyter, Streamlit, Flask, PyTorch, TensorFlow, TensorRT, Pandas, Scikit-learn, Scipy, OpenCV, C++, C.

## PROJECTS

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- **Projects:** The projects can be found in my GitHub and HuggingFace profiles.

## SKILLS

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- **Soft Skills:** Teamwork, Time management, Communication, Leadership, Presentation, Teaching
- **Programming languages:** Python, C++, C, Java, Matlab
- **Version control (CI/CD):** Git, GitHub, GitLab
- **Frameworks:** Numpy, Scipy, Pandas, Matplotlib, Scikit, OpenCV, TensorFlow, PyTorch, Streamlit, Flask, FastAPI, etc.
- **Miscellaneous Tech:** Linux, SQLite, MySQL, Docker, MLFlow, HuggingFace, Microsoft Azure, AWS
- **Languages:** English (professional), Dutch (elementary), Kannada (native), Hindi (professional)

## NOTABLE AWARDS AND ACHIEVEMENTS

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### Student project award

Groningen, The Netherlands

University of Groningen

2022-2023

- **GroNLP:** One of the best student project awards in the NLP course at the University of Groningen, for the word inflection relearning project.

### Most valuable problem award

Amsterdam, The Netherlands

Dutch Summer of AI, edition 2022

2021-2022

- **Summer AI Intern at Tata Steel in Europe:** Our team won the award for Solving the Most Valuable Problem, among nine participating teams at the Dutch Summer of AI.

### Best solution award

Groningen, The Netherlands

Beta Business Days, edition 2022

2021-2022

- **B & S case study - Text recognition challenge:** Won the best solution award by developing a web application solution using the Azure cognitive services API.

### Student project award

Groningen, The Netherlands

University of Groningen

2021-2022

- **Acute Myeloid Leukemia Prediction Challenge:** Our team won the 2<sup>nd</sup> best performer award in the Acute Myeloid Leukemia Prediction Challenge conducted in the Introduction to Data Science course at the University of Groningen.