

# Abhishek Ramanathapura Satyanarayana

Groningen, the Netherlands



## RESEARCH INTERESTS

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- Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, Robot Perception

## EDUCATION

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- **University of Groningen [RUG]** Groningen, The Netherlands  
*M.Sc. in Artificial Intelligence* Sep 2021 - present
- **Honours College, University of Groningen** Groningen, The Netherlands  
*Honours Master's in High Tech Systems and Materials (HTSM)* Nov 2021 - Jun 2023
- **National Institute of Technology Karnataka [NITK]** Surathkal, Mangaluru, India  
*B.Tech. in Information Technology, CGPA: 8.3/10* Jul 2012 - May 2016

## EXPERIENCE

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- **FSE, University of Groningen** Groningen, The Netherlands  
*Teaching Assistant (Part-time)* May 2023 - Jun 2023
  - **Teaching Assistant (TA):** Part-time work as a TA for *Handwriting Recognition* course offered by Faculty of Science and Engineering (FSE), University of Groningen.
- **FSE, University of Groningen** Groningen, The Netherlands  
*Teaching Assistant (Part-time)* Feb 2023 - Apr 2023
  - **Teaching Assistant (TA):** Part-time work as a TA for *Deep Learning* and *Computer Vision* courses offered by Faculty of Science and Engineering (FSE), University of Groningen.
- **FSE, University of Groningen** Groningen, The Netherlands  
*Teaching Assistant (Part-time)* Sep 2022 - Nov 2022
  - **Teaching Assistant (TA):** Part-time work as a TA for *Cognitive Robotics* and *Introduction to Data Science* courses offered by Faculty of Science and Engineering (FSE), University of Groningen.
- **Tata Steel in Europe** IJmuiden, The Netherlands  
*Summer AI Intern* Jul 2022 - Aug 2022
  - **Dutch Summer of AI:** This summer internship was a part of the Dutch Summer of AI, edition 2022. Our team won the award for Solving the Most Valuable Problem. Worked on supervised and unsupervised deep learning methods to classify and cluster images with steel surface defects.
- **UMCG** Groningen, The Netherlands  
*Teaching Assistant (Part-time)* Jun 2022 - Jul 2022
  - **Summer School Data Science and AI in Health:** Part-time work as a Teaching Assistant.
- **Philips Consumer Lifestyle B.V.** Drachten, The Netherlands  
*Internship (Part-time)* Nov 2021 - Jul 2022
  - **Industrial Challenge Internship:** Part-time internship work as a part of HTSM Honours Master's.
- **Ati Motors** Bengaluru, India  
*Research Associate (Machine Learning) in Autonomy* Sep 2017 - Jun 2021
  - **Machine learning:** Worked on research, prototype, development, and deployment of Machine Learning, Deep Learning, Computer Vision, Robot Perception, and Algorithm solutions for autonomous cargo vehicles. This involved using the LiDAR and multi-modal camera data (i.e. RGBD) for developing various ML pipelines with a focus on object classification in 2D images, object detection in 2D images, semantic segmentation in 2D images, and semantic segmentation in 3D LiDAR point cloud data.

- **HW benchmarking:** Benchmarking of various ML models that were developed on multiple HW devices such as Nvidia's server GPUs, Intel Movidius stick, and Nvidia Xavier embedded development board.
- **Sensor drivers:** Active involvement in prototype, development, deployment, and testing of various LiDAR and camera sensor drivers (including multi-modal i.e. RGBD camera).
- **Sensor data pipelines:** Active involvement in development, deployment, and testing of various raw and derived sensor data pipelines.
- **Testing:** Active involvement in testing algorithm pipelines on prototype and production vehicles.
- **Demos and deployment:** Active involvement in multiple customer demos and successful deployment activities at various customer sites.

### Indian Institute of Science

Bengaluru, India

*Project Assistant Intern at HPC Lab in SERC*

*Jun 2016 - Dec 2016*

- **Professor guide:** Prof. R Govindarajan
- **Parallel programming:** Worked on implementation and benchmarking of data parallel algorithms.

### J P Morgan Chase

Mumbai, India

*Technology Analyst Intern in Investment Banking*

*May 2015 - Jul 2015*

- **Data analysis:** Worked on data analysis of real-time transaction data.

## TECH AND LANGUAGE SKILLS

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- **Programming languages:** Python, C++, Matlab, C
- **Version control (CI / CD):** Git, GitHub, GitLab
- **Miscellaneous Tech:** SQLite, MySQL, Docker, Microsoft Azure, AWS
- **Languages:** English, Dutch (A1), Kannada (native), Hindi

## NOTABLE PROJECTS

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- **M.Sc. AI thesis research project at RUG:** The AI thesis research project is titled **Enhancing depth estimation for Transparent objects** using novel encoder-decoder architecture. The proposed architecture outperformed the state-of-the-art method for this task. This pipeline can be further used for planning grasps for transparent objects. All the code developed for this research is available in a GitHub repository.
- **Other projects:** The code for all the other projects is available in the GitHub repositories.

## NOTABLE AWARDS AND ACHIEVEMENTS

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- **Natural Language Processing course** Groningen, The Netherlands  
*2022-2023*
  - **GroNLP:** One of the best student project awards for the year 2022-2023 in the NLP course at the University of Groningen, for the inflection relearning project.
- **Dutch Summer of AI, edition 2022** Amsterdam, The Netherlands  
*2021-2022*
  - **Summer AI Intern at Tata Steel in Europe:** Our team won the award for Solving the Most Valuable Problem, among 9 participating teams at the Dutch Summer of AI, edition 2022.
- **Beta Business Days, edition 2022** Groningen, The Netherlands  
*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.
- **Acute Myeloid Leukemia Prediction Challenge** Groningen, The Netherlands  
*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 as part of the Introduction to Data Science Master's course at the University of Groningen