

Abhishek Ramanathapura Satyanarayana

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RESEARCH INTERESTS

- Machine Learning, Computer Vision, Robot Perception, Artificial Intelligence, Mobile Robot Systems.

EDUCATION

- **University of Groningen [RUG]** Groningen, the Netherlands
M.Sc. in Artificial Intelligence Sep 2021 - present
- **National Institute of Technology Karnataka [NITK]** Surathkal, Mangaluru, India
B.Tech. in Information Technology, CGPA: 8.3/10 Jul 2012 - May 2016

EXPERIENCE

- **Ati Motors** Bengaluru, India
Research Associate 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 various algorithm pipelines on prototype and production vehicles.
 - **Demos and deployment:** Active involvement in multiple potential customer demos and successful customer deployment activities at customer sites. This includes Ati's successful first and further customer deployments.
- **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 to achieve high performance on hardware accelerators using APIs - CUDA C, OpenCL, OpenMP.
- **J P Morgan Chase** Mumbai, India
Technology Analyst Intern in Investment Banking May 2015 - July 2015
 - **Data analysis:** Worked on data analysis of real-time transaction data.

PROFILES

- LinkedIn: <https://www.linkedin.com/in/abhishek-ramanathapura-satyanarayana-862608a0/>
- Github: <https://github.com/AbhishekRS4/>
- Kaggle: <https://www.kaggle.com/abhishekrs4/>

PROGRAMMING LANGUAGES AND TECH SKILLS

- **Programming languages:** Python, C, C++, Java, Matlab
- **Database:** SQLite, MySQL
- **Version control:** Git

SELF LEARNING COURSES

- Machine Learning, Coursera (Certification)
- Mathematics for Machine Learning Specialization, Coursera (Certification)
- Deep Learning Specialization, Coursera (Certification)
- Applied Data Science Specialization, Coursera (Certification)
- Python for Everybody Specialization, Coursera (Certification)
- Robotics - Perception, Coursera (Certification)
- An Intuitive Introduction to Probability, Coursera (Certification)
- Data Science Math Skills, Coursera (Certification)
- Fibonacci Numbers and Golden Ration, Coursera (Certification)
- Parallel Programming and Optimization for Intel Architectures, Colfax Research (Certification)
- Course Certificates -
<https://drive.google.com/drive/folders/0Byk-dMy2pBxeX21IbmRIWFExNFk?usp=sharing>

NOTABLE AWARDS AND ACHIEVEMENTS

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|---|--------------------|
| • All India Engineering Entrance Examination [now replaced by JEE mains]
<i>Secured a national rank of 6279 among 1200000 candidates</i> | India
2011-2012 |
| • Karnataka Common Entrance Test [KCET] for Engineering
<i>Secured a state rank of 404 among 80000 candidates</i> | India
2011-2012 |
| • Pre-university Science quiz
<i>3rd prize in science quiz</i> | India
2011-2012 |
| • Annual high school awards
<i>3rd best outgoing student award</i> | India
2009-2010 |
| • Bharath ko jano (translation: Know about India)
<i>2nd prize in inter high school quiz competition conducted by Bharath Vikas Parishad</i> | India
2009-2010 |

- **Annual high school quiz competition** India
2nd prize 2009-2010
- **Annual high school quiz competition** India
1st prize 2008-2009
- **National Science Olympiad** India
1st prize for my high school 2007-2008
- **Chess competitions in School** India
Various prizes in primary and high school including 3 first and 2 runner-up prizes 2005-2010
- **All India General Knowledge by Center for Human Resource Development** India
Completion of CHRD general knowledge competition with distinction 2005-2006

EXTRA CURRICULAR ACTIVITIES

- **IMTEX FORMING 2020 held at BIEC** Bengaluru, India
Represented Ati Motors (as standby) Jan 2020
- **Poster session held at Indian Institute of Science** Bengaluru, India
Represented Ati Motors Jul 2019
- **Incident-16 (cultural festival of NITK)** Surathkal, Mangaluru, India
Team member that conducted the Gaming events of Incident-16 Mar 2016
- **TECHeshi's castle at NITK IEEE tech festival** Surathkal, Mangaluru, India
Team member that conducted the event Dec 2012 - Jan 2013
- **Bengaluru district level science exhibition** Bengaluru, India
Presented on water conservation using rain water harvesting 2007-2008
- **Bala Janagraha Civic learning programme** Bengaluru, India
Completed the civic learning programme in high school 2007-2008

REFERENCES

- Dr. Geetha V
Assistant Professor
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National Institute of Technology Karnataka, India
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