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 camera data 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.
  - **Sensor drivers**: Active involvement in prototype, development, deployment, and testing of various LiDAR and camera sensor drivers.
  - **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. This includes Ati's successful first and further customer deployments.

- **Freelancer** — Bengaluru, India
  Freelancer — *Jan 2017 - Jun 2017*
  - **Data science and data analysis**: Worked as a freelancer on a few projects.

- **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-dMy2pBxeX21IbmRlWFExNFk?usp=sharing

Notable Awards and Achievements

- **All India Engineering Entrance Examination [now replaced by JEE mains]**   India
  Secured a national rank of 6279 among 1200000 candidates   *2011-2012*

- **Karnataka Common Entrance Test [KCET] for Engineering**   India
  Secured a state rank of 404 among 80000 candidates   *2011-2012*

- **Pre-university Science quiz**   India
  3rd prize in science quiz   *2011-2012*

- **Annual high school awards**   India
  3rd best outgoing student award   *2009-2010*

- **Bharath ko jano (translation: Know about India)**   India
  2nd prize in inter high school quiz competition conducted by Bharath Vikas Parishad   *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
  Department of Information Technology
  National Institute of Technology Karnataka, India
  Email: geethav@nitk.edu.in
  Website: https://infotech.nitk.ac.in/faculty/geetha-v

- Dr. Jaidhar C D
  Associate Professor
  Department of Information Technology
  National Institute of Technology Karnataka, India
  Email: jaidharcd@nitk.edu.in
  Website: https://infotech.nitk.ac.in/faculty/jaidhar-c-d