

# Sudarshan Balaji

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Ambitious and a Curiosity driven person capable of applying calmness and an analytical behavior in a professional locale. History of teamwork and result-driven behavior are demonstrated through Extra-curricular activities and in-depth projects.  
**Interests include: Data Science, Data Analytics, Machine Learning, Image and Signal Processing.**

## Education

Aug 2022	<b>Bachelor in Engineering: Electronics and Telecommunication Engg.</b> RV College of Engineering, Bengaluru, Karnataka Finished within top 10% of the class. Cumulative GPA: 3.5/4.
Apr 2018	<b>Pre-University Education</b> VVS Sardar Patel PU College, Bengaluru, Karnataka
Apr 2016	<b>High School Education</b> VVS SPHS, Bengaluru, Karnataka

## Skills

Analytical	Interpersonal Skills
Research oriented	Python
Flexible	MatLab

## Projects

Mar 2022 - Present	<b>Detection of Vulnerable GitHub workflows using Machine Learning</b> Project with Purdue University, West Lafayette The aim of the project is to identify or detect vulnerabilities present within GitHub's workflows thus reducing the risk of allowing adversaries access privileged data.
Nov 2020 - Apr 2021	<b>Vehicle Detection using fusion of Camera and RADAR under different weather Conditions</b> Project under Wipro IISc Research and Innovation (WIRIN) This Project aims at detecting vehicles under adverse and extreme weather conditions and has an extensive use of Machine Learning and Deep Learning. A corresponding simulation was exhibited using the RADIATE dataset.
Nov 2020 - Feb 2021	<b>Member of WIRIN Project for Autonomous vehicles</b> Was a part of the <b>Wipro IISc Research and Innovation (WIRIN)</b> Project for Autonomous Vehicles, specifically contributing to the Data Collection Team, which dealt with detection of vehicular components in images.
Jun 2020 - Aug 2020	<b>Contribution to Indian Knowledge Systems (IKS)</b> Contributed to an AICTE sponsored project on the Development of a textbook on Indian Knowledge Systems for the Engineering students under <b>Dr. B Mahadevan, Professor, Production &amp; Operations Management, IIM Bangalore</b> . Specially played a role in collecting and organizing relevant material for one of the chapters titled "Astronomy".

## List of Publications

Aug 2022	<p><b>Kuṭṭikāra equations in Mahāvīracāryā's Gaṇitasārasaṅgraha</b></p> <p>A Mathematics paper titled " <b>Kuṭṭikāra equations in Mahāvīracāryā's Gaṇitasārasaṅgraha</b> " has been accepted at an International Conference conducted on Dec. 11 - Dec. 13, 2020 which was conducted virtually in view of the Pandemic situation. This was organized by JAINA, also funded by <b>Sir John Templeton Foundation, Boston</b>. The paper is published as a part of a monograph by the World Scientific Publishing Company. DOI: <a href="https://doi.org/10.1142/12813">https://doi.org/10.1142/12813</a></p>
Nov 2021	<p><b>Materials used for RFID technology and their applications</b></p> <p>A paper titled "Materials used for RFID technology and their applications" has been accepted in the International Conference on Technologies for Smart Green Connected Societies (ICTSGS -1) conducted virtually on Nov. 29 - Nov. 30 2021. DOI: <a href="https://doi.org/10.1149/10701.12189ecst">https://doi.org/10.1149/10701.12189ecst</a></p>
Nov 2021	<p><b>Metal oxide based electrochromic materials: Recent advances in Synthesis, characterization and applications</b></p> <p>A paper titled "Metal oxide based electrochromic materials: Recent advances in Synthesis, characterization and applications" has been accepted in the International Conference on Technologies for Smart Green Connected Societies (ICTSGS - 1) conducted virtually on Nov. 29 - Nov. 30 2021. DOI: <a href="https://doi.org/10.1149/10701.18583ecst">https://doi.org/10.1149/10701.18583ecst</a></p>
Oct 2021	<p><b>Design of circularly polarized Square Patch Antenna Array on different substrates</b></p> <p>A paper titled "Design of circularly polarized Square Patch Antenna Array on different substrates" has been published in 2021 2nd Global Conference for Advancement in Technology (GCAT) which was held on Oct. 1 - Oct. 3. DOI: <a href="https://doi.org/10.1109/GCAT52182.2021.9587573">10.1109/GCAT52182.2021.9587573</a></p>
Nov 2019	<p><b>Mathematics in Tiloyapannatti</b></p> <p>A Mathematics paper titled "Mathematics in Tiloyapannatti" has been accepted at an International Conference conducted on November 3 - November 5, 2019 at Tijara, Rajasthan. This is yet to be published</p>

## Extracurricular activities

Sep 2021 - Present	<p><b>Co-Author of a book</b></p> <p>Currently working on a book titled "<b>Indian Knowledge Systems: Handbook on Mathematics</b>" which aims to give a brief and gentle introduction to the various Ancient Indian Authors of Mathematics.</p>
May 2018 - Jul 2022	<p><b>Member of NSS - RVCE</b></p> <ul style="list-style-type: none"> <li>• Played an important role as a member of NSS to serve the society. Was a part of the drive which allowed us to teach the under- privileged and economically backward students at Govt. Schools near the locality.</li> <li>• Played an important role in Rejuvenating schools in remote areas thereby providing a healthy and clean environment for the children to study.</li> <li>• Was a part of various drives conducted for the welfare of differently-abled children, thereby raising funds for their wellbeing and providing basic amenities.</li> </ul>

## Awards/Achievements

- Was awarded a cash award for my persistent efforts towards the field of **Mathematics and IKS**.
- Was awarded a certificate by **NSS** for my contributions towards the upliftment of the under-privileged and service to society.
- A letter of Appreciation was awarded by **Dr. B Mahadevan, Professor, Production & Operations Management, IIM Bangalore** as a form of recognition towards the contribution made in the field of Indian Knowledge Systems.
- Was awarded a certificate of Appreciation for the role played in the Data Collection team of the **WIRIN** project.
- Was part of the RADAR Division under the WIRIN Project which surveyed and researched on the effects of RADAR and its impact in Autonomous Vehicles.
- Part of an **MoU** (Memorandum of Understanding) between **RV College of Engineering and University of Purdue, West Lafayette** which aims at finding novel methods for Detection of Potential Vulnerabilities within GitHub Workflows.

## References

**Dr. H V Kumaraswamy**

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