

## RESUME

- 1. Name (in Block Letters)** : G. R. HEMALAKSHMI  
**2. Present Post / Dept.** : Assistant Professor(SG)  
**3. Residential Address** : 8/1, Krishnan Kovil East Street,  
Palayamkottai,  
Tirunelveli District  
Tamil Nadu  
**4. Marital Status** : Married  
**5. Educational Qualification** :



| <i>Educational Qualification</i> | <i>Branch</i>          | <i>Name of the Institution/University</i>                     | <i>Yr. of Passing</i> | <i>% of Marks</i> | <i>Class/ Division</i> |
|----------------------------------|------------------------|---|-----------------------|-------------------|------------------------|
| B.E./B.Tech./B.Sc.,              | Computer Science       | Rani Anna Government College of Arts and Science, Tirunelveli | 2000                  | 70.02             | I                      |
| M.E./M.Tech/M.C.A,               | Computer Applications  | Institute of Road and Transport Technology, Erode             | 2003                  | 83.84             | I                      |
| M.Tech                           | Information Technology | Manonmaniam Sundaranar University                             | 2008                  | 79                | I with Distinction     |
| Pursuing Ph.D                    | ICE                    | Anna University   | -                     | -                 | -                      |

**6. No. of years of Experience** : National Engineering College - 11 Years

**7. No. of Papers Presented in Conference/Seminar:**

**a) International Conference:** 6

**b) National Conference:** 4

### International Conference Publications

| <b>S.No</b> | <b>Title of the Paper</b>  | <b>Name of the Conference</b>   | <b>Organizer</b>                             | <b>Year</b> |
|-------------|--|---|--|-------------|
| 1           | Android Application for National Engineering College   | International Conference on Recent Advances in Communication Systems and Technologies       | Francis Xavier Engineering College           | 2018        |
| 2           | Extraction of Text from an Image and its Language Translation using OCR  | International Conference on Internet Of Things and Applications for Smart city (ICIOTAS-17) | MITADT university, Pune                      | 2017        |
| 3           | Differentiation of paddy grains & analyzing the defects in paddy grains using Image Processing                             | International Conference on Business and Disaster Management                                | Noorul Islam University, Nagercoil           | 2014        |
| 4           | Automatic Railway Level Crossing Control Using Android   | International Conference on Innovative Trends in Computing & Technology                     | The Rajaas Engineering College, Vadakangulam | 2014        |
| 5           | Analysis of Medical Image Using Centriod Morphic Clustering Algorithm  | International Conference on Computing, Communication & Advanced Network                     | Chennai Institute of Technology, Chennai     | 2013        |
| 6           | A Novel Protocol Providing Probabilistic QoS Guarantee in Terms of Reliability and Timeliness for Wireless Sensor Networks | International Conference on Sensors and Related Networks                                    | VIT University, Vellore                      | 2009        |

**National Conference Publications**

| S.No | Title of the Paper   | Name of the Conference  | Organizer   | Year |
|------|--|---|---|------|
| 1    | Habitual Railway Level Crossing Control Using Sensors and Android                            | National Conference on Recent Trends in power and Energy Engineering                | SSN College of Engineering, Chennai               | 2014 |
| 2    | Mathematical Modeling on AC Pollution Flashover Performance of Glass and Composite Insulator | National Conference on Recent Trends in power and Energy Engineering                | SSN College of Engineering, Chennai               | 2014 |
| 3    | Analysis of Medical Image Using Centriod Morphic clustering Algorithm                        | National Conference on Recent Advancement in Computer and Communication Engineering | Mar Ephraem College of Engineering and Technology | 2013 |

**State Level Paper Presented**

| S.No | Title of the Paper   | Name of the Convention                                 | Organizer                              | Year |
|------|--|--|--|------|
| 1    | Guidelines for aligning content delivery methods to model scholarly and innovative Teaching-Learning process | 17 <sup>th</sup> ISTE TN & P Section Annual Convention | ISTE, TN & P Section & NEC, Kovilpatti | 2014 |

**8. No. of Publications in Journals:****a) International Journals: 20****b) National Journals: Nil**

| S.No. | Title  | Name of Journal   | Year          |
|-------|--|---|---------------|
| 1     | Security Based Adversary Prevention Scheme for MANET   | Bioscience and Biotechnology Research Communication( <b>ESCI</b> )                              | May 2020      |
| 2     | Breathe Analyzer for Respiratory Diseases: A Review  | International Journal of Advanced Science and Technology  | April 2020    |
| 3     | Home Reconnaissance and Surveillance   | International Journal of Recent Technology and Engineering (IJRTE)                              | March 2020    |
| 4     | Smart Inverter Monitoring System – SIMS  | International Journal of Scientific & Technology Research ( <b>Scopus</b> )                     | March 2020    |
| 5     | Image Processing Techniques for Diagnosis of Glaucoma from the Retinal Image: Brief Review                           | Journal of Clinical and Diagnostic Research (Embedded Science Citation Indexed ( <b>ESCI</b> )) | Feb 2020      |
| 6     | An Image based Encryption Algorithm for Multimedia Applications  | International Journal of Engineering and Advanced Technology( <b>Scopus</b> )                   | December 2019 |
| 7     | Efficient Brain Image Segmentation Technique Based On Entropy With Genetic Algorithm                                 | Bioscience and Biotechnology Research Communication( <b>ESCI</b> )                              | December 2019 |
| 8     | High Performance Grouping With Load Balancing Scheme for Wireless Sensor Networks                                    | International Journal of Advanced Science and Technology ( <b>Scopus</b> )                      | November 2019 |
| 9     | The Role of Optic Disc, Retinal Blood Vessels and Exudates in Detection of Diabetic Retinopathy: A Literature Review | Journal of Clinical and Diagnostic Research (Embedded Science Citation Indexed ( <b>ESCI</b> )) | March 2019    |
| 10    | Identification of Abnormalities in Retina Using Machine Learning Technology  | International Journal of Innovative Research in Technology                                      | March 2019    |
| 11    | Fundus Image Classification Using Wavelet Based Features in Detection of Glaucoma                                    | Biomedical & Pharmacology Journal ( <b>Scopus</b> )   | June 2018     |

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|----|---|--|--------------|
| 12 | Android Application for National Engineering College  | Asian Journal of Applied Science and Technology (AJAST)                                    | April 2018   |
| 13 | Detection of Microaneurysms in Fundus Images using ELM classifier   | International Journal of Current Pharmaceutical Review and Research.(Annexure II)          | June 2017    |
| 14 | Industrial Energy Consumption Cost Analysis   | International Journal of Emerging Technology and Advanced Engineering. (UGC)               | June 2017    |
| 15 | An efficient approach on optic disc detection and retinal blood vessel segmentation for diabetic retinopathy based on support vector machine                | Journal of Chemical and Pharmaceutical Sciences (Annexure II)                              | July 2016    |
| 16 | Android Application To Locate And Track Mobile Phones (AALTM)-An Implementation Of Location Based Services  | International Journal of Contemporary Research in Computer Science and Technology (IJRCST) | March 2016   |
| 17 | Energy Aware Web Browsing On Hand Held Smart Devices Using Attention Time Prediction  | International Journal of Contemporary Research in Computer Science and Technology (IJRCST) | March 2016   |
| 18 | Automated grading of diabetic retinopathy stages in fundus images using SVM classifier  | Journal of Chemical and Pharmaceutical Research(Annexure II)                               | January 2016 |
| 19 | Differentiation of paddy grains & analyzing the defects in paddy grains using Image Processing  | International Journal of Emerging Technologies   | April 2014   |
| 20 | Development of Algorithm for dual stage classification to estimate severity level of diabetic retinopathy in retinal images using soft computing techniques | International journal on Electrical Engineering and Informatics (Annexure II) (Scopus)     | Dec 2014     |

**9. (a) No. of Seminar/Workshop Attended : 10**

| S.No | Institution                                 | Topic  | Course Detail               | Date                     |
|------|---|--|-----------------------------|--------------------------|
| 1    | National Engineering College                | Scilab Workshop                              | Workshop                    | 04.05.2019               |
| 2    | National Engineering College                | Technology Enabled Teaching Learning Process | Training Program            | 27.05.2017 to 29.05.2017 |
| 3    | National Engineering College                | Research Aspirants Meet                      | Seminar                     | 07.01.2016 to 08.01.2016 |
| 4    | AU – KBC Research Centre, MIT, Chennai      | Video Analytics                              | Workshop                    | 10.10.2014 & 11.10.2014  |
| 5    | K.L.N College of Information Technology     | Operating System Design Case Study           | Faculty Development Program | 06.03.2014 & 07.03.2014. |
| 6    | National Engineering College                | Thermograph in Image Processing              | Seminar                     | 04.10.2013 & 05.10.2013  |
| 7    | Anna University Regional Centre, Coimbatore | Image & Video Processing                     | Workshop                    | 01.03.2013 & 02.03.2013  |
| 8    | National Engineering College                | New Fangled N/W Architecture -Spanning N/W   | Seminar                     | 18.02.2011 & 19.02.2011  |
| 9    | SRM University, Chennai                     | S/W Quality Engg                             | Seminar                     | 11.12.2009 & 12.12.2009  |
| 10   | National Engineering College                | Recent Research in Multi Perception          | Seminar                     | 18.09.2009 & 19.09.2009  |

**(b) No. of FDP Attended : 7**

| S.No | Institution                        | Topic  | Course Detail              | Date                    |
|------|------------------------------------|--|----------------------------|-------------------------|
| 1    | Vardhaman College of Engineering   | Machine Learning in Image and Computer Vision Applications | NIT Warangal Organized FDP | 25.11.2019 – 30.11.2019 |
| 2    | Thiagarajar College of Engineering | AI and Machine Learning                                    | TQIP Sponsored             | 01.10.2018 – 06.10.2018 |

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|---|--|---|---|-------------------------|
| 3 | IIT, Indore, MP                            | Advanced Pattern Recognition Techniques for Biometrics            | GIAN Course   | 05.03.2018 – 09.3.2018  |
| 4 | Infosys Campus, Mahindra City, Chennai     | Big Data Analytics  | Infosys Campus Connect - Faculty Enablement Program | 07.09.2015 – 09.09.2015 |
| 5 | M.Kumarasamy College of Engineering, Karur | FP Training Tools and Teaching Methodologies                      | Infosys Campus Connect - Faculty Enablement Program | 03.02.2014 – 07.02.2014 |
| 6 | National Engineering College               | Prospective issues and Methodologies in Human Machine Interaction | Staff Development Program                           | 17.05.2010 – 21.05.2010 |
| 7 | National Engineering College               | Mission 10X Workshop  | Faculty Workshop                                    | 30.11.2009 – 04.12.2009 |

**(c) No. of Online Course Attended : 34**

| S.No | Institution  | Topic  | Date                     |
|------|--|--|--------------------------|
| 1    | University of Michigan through Course ERA                    | Programming for Everybody (Getting Started with Python)  | 30.05.2020               |
| 2    | Course ERA   | Basic Image Classification with TensorFlow   | 30.05.2020               |
| 3    | University of California through Course ERA                  | C for Everyone: Programming Fundamentals   | 28.05.2020               |
| 4    | University of California through Course ERA                  | C++ for Everyone   | 27.05.2020               |
| 5    | University of Washington using Course ERA                    | Machine Learning Foundations: A Case Study Approach  | 21.05.2020               |
| 6    | Google Cloud through Course EAR                              | Machine Learning for Business Professionals  | 21.05.2020               |
| 7    | University of Michigan through Course ERA                    | Introduction to Data Science in Python   | 18.05.2020               |
| 8    | IBM through Course ERA                                       | Network Security & Database Vulnerabilities  | 16.05.2020               |
| 9    | Course ERA   | AI For Every One   | 13.05.2020               |
| 10   | UC San Diego – Higher School of Economics through Course ERA | Data Structures  | 14.05.2020               |
| 11   | IBM through Course ERA                                       | Machine Learning with Python   | 23.04.2020               |
| 12   | Duke University through Course ERA                           | Programming Fundamentals   | 04.03.2020               |
| 13   | AICTE Training And Learning (ATAL) Academy                   | Online FDP on "Internet of Things (IoT)  | 30.04.2020 to 04.05.2020 |
| 14   | IIT Bombay Spoken Tutorial                                   | LATEX  | 17.04.2020 to 30.04.2020 |
| 15   | Universal Teachers Academy, Pondichery                       | Online Workshop for Teachers – Creation of Basic , Animation, Stop Motion, Editing, Creating, Uploding the E- Content on Web | 21.04.2020 to 30.04.2020 |
| 16   | Udemy  | Machine Learning A-Z: Hands-On Python & R In Data Science  | 12.04.2020               |
| 17   | Udemy  | Adobe Photoshop from Scratch   | 02.04.2020               |
| 18   | Udemy  | Java For Complete Beginners  | 09.03.2020               |
| 19   | Udemy  | Java Tutorial for Complete Beginners   | 09.03.2020               |
| 20   | SOLO Learn   | C  | 09.03.2020               |
| 21   | SOLO Learn   | C#   | 06.03.2020               |

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| 22 | SOLO Learn  | SQL  | 05.03.2020                     |
| 23 | SOLO Learn  | HTML   | 04.03.2020                     |
| 24 | SOLO Learn  | PHP  | 03.03.2020                     |
| 25 | IIT Bombayx   | 3D Visualization and Animation                   | September 2019 – December 2019 |
| 26 | NPTEL and IIT Kharagpur                                 | NPTEL – Problem solving through Programming In C | Jan – April 2018               |
| 27 | Mathworks, Training Services Self based Training Course | MATLAB Onramp                                    | 10.07.2018                     |
| 28 | Mathworks, Training Services Self based Training Course | Deep Learning Onramp                             | 13.07.2018                     |
| 29 | SOLO Learn  | C++  | 23.07.2018                     |
| 30 | SOLO Learn  | JAVA   | 25.07.2018                     |
| 31 | Udemy   | Introduction to Programming with JAVA            | 27.02.2019                     |
| 32 | Indian Institute of Technology Bombay                   | Fundamentals of 3D Visualization                 | Sep – Dec 2019                 |
| 33 | Indian Institute of Technology Bombay                   | Basic 3D Animation using Blender                 | Sep – Dec 2019                 |
| 34 | Indian Institute of Technology Bombay                   | Basic 3D Modeling using Blender                  | Sep – Dec 2019                 |

**(d) No. of Industrial Training Attended : 1**

| S.No | Organization             | Topic   | Date                     |
|------|--------------------------|---|--------------------------|
| 1    | Smackcoders, Tirunelveli | Industrial Know-How Training Program on Web Development | 01.04.2019 to 05.04.2019 |

**(e) No. of Webinar Attended - 19**

| S.No | Organization   | Topic  | Date       |
|------|--|--|------------|
| 1    | University college of Engineering, with Pantech e Learning                   | Concepts in Machine Learning Using Python                      | 05.06.2020 |
| 2    | Anurag University, Hyderabad with Pantech e Learning                         | MQTT Protocols Demonstration and Hands on                      | 04.06.2020 |
| 3    | Johinpally B.R. Engineering college, Hyderabad with Pantech e Learning       | Matlab Interfacing with Fuzzy Logic Tool Boxes                 | 03.06.2020 |
| 4    | Kalasalingam Institute of Technology with Pantech e Learning                 | Applying Convolution Neural Networks – A Deep Learning         | 02.06.2020 |
| 5    | Tamil Nadu College of Engineering with Pantech e Learning                    | Mastering Machine Learning – An Introductory Guide with Matlab | 01.06.2020 |
| 6    | Sivajirao Kadam Institute of Technology & Management with Pantech e Learning | Webinar on Deep Learning With Neural Networks                  | 30.05.2020 |
| 7    | Adhiyamaan College of Engineering with Pantech e Learning                    | Artificial Intelligence for Employee Attribution               | 29.05.2020 |
| 8    | Institute of Aeronautical Engineering With Pantech e Learning                | Deep Learning using Tensor Flow and Keras                      | 27.05.2020 |

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|----|--|---|------------|
| 9  | Meenakshi College of Engineering with Pantech e Learning | Webinar on Data Science and Its Application                                   | 27.05.2020 |
| 10 | Vivekanandha college of Arts & Sciences for Women        | How to Publish a Paper  | 22.05.2020 |
| 11 | Codegnan IT solutions OPC PVT. Ltd                       | Building Support Vector Machine Learning Model                                | 16.05.2020 |
| 12 | Codegnan IT solutions OPC PVT. Ltd                       | Natural Language Processing   | 13.05.2020 |
| 13 | Codegnan IT solutions OPC PVT. Ltd                       | Building Decision Tree from Scratch using Python                              | 09.05.2020 |
| 14 | Codegnan IT solutions OPC PVT. Ltd                       | Polynomial Regression using Python  | 07.05.2020 |
| 15 | MAHENDRA INSTITUTE OF TECHNOLOGY                         | Artificial Intelligence   | 06.05.2020 |
| 16 | Codegnan IT solutions OPC PVT. Ltd                       | Building a Model App for Machine Learning Model                               | 05.05.2020 |
| 17 | IETE(Mumbai) With Pantech e Learning                     | Machine Learning  | 02.05.2020 |
| 18 | KPR Institute of Engineering and Technology              | Introduction to Deep Learning Using ANACONDA                                  | 30.04.2020 |
| 19 | DataTech. ai   | Research outcomes : Technical Paper Writing, Research Proposal, Patent Filing | 22.04.2020 |

**(e) No. of Online Quiz Attended - 7**

| S.No | Organization                                 | Topic  | Date       |
|------|--|--|------------|
| 1    | Government Arts College, Kumbakonam          | National Level NCC E – Quiz 2020 “MAP Reading”               | 10.06.2020 |
| 2    | Government Arts College, Kumbakonam          | National Level NCC E – Quiz 2020 “Armed Forces”              | 07.06.2020 |
| 3    | Sri Adi Chunchanagiri Womens College, CUMBAM | On Line Quiz on Green Environment                            | 05.06.2020 |
| 4    | Government Arts College, Kumbakonam          | National Level NCC E – Quiz 2020 “Miscellaneous”             | 04.06.2020 |
| 5    | Government Arts College, Kumbakonam          | National Level NCC E – Quiz 2020 “Drill and Weapon Training” | 03.06.2020 |
| 6    | RGM College of Engineering and Technology    | JAVA Programming   | 03.06.2020 |
| 7    | Sou. Venutai Chavan Polytechnic              | Java Programming   | 19.05.2020 |

**10. Contribution to the Institution:**

1. NCC Care Take – 3 (TN) Girls BN NCC (From August 2016 – November 2017)
2. ERP Member – In charge for overall internal Calculation & Updating External marks in ERP (2015-2017)
3. IBM Coordinator (2010 – 2013)
4. Associate NCC Officer from November 2017.

**11. Contribution to the Department:**

1. NAAC – Coordinator (From 2013)
2. NON CGPA Coordinator(From 2016 to March 2019)
3. Class In charge
4. IBM Lab In Charge(From 2012 to 2018)

**12. Specific Achievement if any:****Awards:**

| S. No | Award Name   | Institution/Academy/Organization                       | Year       |
|-------|--|--|------------|
| 1     | Commandants Excellence in NIAP (PRCN Course Aug 2017 – Nov 2017) | OTA Gwalior  | Nov 2017   |
| 2     | Gold Partner Faculty   | Inspire – The Campus Connect Faculty Partnership Model | March 2018 |
| 3     | Silver Partner Faculty   | Inspire – The Campus Connect Faculty Partnership Model | 2019       |

**Projects Applied**

| S. No | Project Title  | Funding Agency | Amount         |
|-------|--|----------------|----------------|
| 1     | Suspicious Events Tracking and Alert System for Crowd Behavior Analysis  | DST (SERB)     | Rs.24,82,000/- |
| 2     | Automatic On-site verification of Voter's Identity in Electoral Roll Management using Facial Data Mining Technique | TNSCST         | Rs.4,21,000/-  |
| 3     | Automated Fundus Image Analysis And Diagnosis Of Diabetic Retinopathy Disease Using Machine Learning Techniques    | ICMR           | Rs.15,00,000/- |

**Seminar / Workshop Applied**

| S. No | Workshop/Seminar Title  | Funding Agency | Amount        |
|-------|---|----------------|---------------|
| 1     | Curriculum Design and Development: A Competitive Approach                           | NAAC           | Rs.70,000/-   |
| 2     | "Enhancing National Security using ICT : Emerging Trends and Challenges"            | DST            | Rs.1,18,000/- |
| 3     | Recent Trends & Research Directions of Deep Learning in Natural Language Processing | CIIL           | Rs. 63,750/-  |

**Workshops/Seminars Organized:**

| S.No | Title   | Duration of the workshop | Number of Participants | Venue |
|------|---|--------------------------|------------------------|-------|
| 1    | CIIL Sponsored Recent Trends & Research Directions of Deep Learning in Natural Language Processing                            | 29.01.2020 & 30.01.2020  | 41                     | NEC   |
| 2    | DST Sponsored National Level Workshop on "Advancements in Visual Sensor Network and its impact on Public Safety and Security" | 08.01.2015 & 09.01.2015  | 40                     | NEC   |
| 3    | IBM Training on Mobile Application Development  | 26.02.2014               | 80                     | NEC   |
| 4    | IBM Training on TDS   | 17.09.2012 to 20.09.2012 | 80                     | NEC   |
| 5    | IBM Training on RFT   | 07.08.2012 to 10.08.2012 | 80                     | NEC   |

|   |                              |                             |     |     |
|---|------------------------------|-----------------------------|-----|-----|
| 6 | IBM Training on RAD          | 22.09.2011 to<br>26.09.2011 | 80  | NEC |
| 7 | IBM Training on DB2          | 01.08.2011 to<br>03.08.2011 | 80  | NEC |
| 8 | IBM Training on Lotus Domino | 15.06.2011 to<br>18.06.2011 | 80  | NEC |
| 9 | TGMC Workshop                | 19.03.2011                  | 150 | NEC |

**Training:**

Attended a Pre Commission Training Program in Officers Training Academy, Gwalior from 14.08.2017 to 11.11.2017 and commissioned as a **lieutenant** from **15.11.2017**.