

# RESUME

## Personal Details

Name	:	Dr. K. MENAKA	
Father's Name	:	Mr. S. KRISHNAMURTHY	
a. Designation and Official Address	:	Assistant Professor Department of Computer Science U. D. College, Trichy – 19.	
b. Date of Appointment	:	27. 02. 2020	
c. Residential Address	:	34/17, Pandamangala Agraharam Woraiyur Trichy – 3.	
d. e-mail id	:	kmenakacs@gmail.com	
e. Telephone / Mobile No.	:	99426 87029	
Nationality	:	Indian	
Sex	:	Female	
Date of Birth	:	27.02.1980	
Languages Known	:	Tamil & English	

## Educational Qualifications

Institution & Place	Year of Passing	Degree Obtained	Class/Percentage
Mother Teresa Women's University, Kodaikanal	2016	State Eligibility Test (SET)	66
Bharathidasan University, Tiruchirappalli	2015	Ph.D. Computer Science	Commended
Bharathidasan University, Tiruchirappalli	2005	M. Phil. Computer Science	I Class with Distinction / 83%
Bharathidasan University, Tiruchirappalli	2002	M. Sc. Computer Science	I Class with Distinction / 83.5%
Bharathidasan University, Tiruchirappalli	2000	B. Sc. Computer Science	I Class with Distinction / 84.2%

## Key Projects

**Project #1:** Project on Cryptography & Network Security - A NOVEL APPROACH FOR ENHANCING INFORMATION ENCRYPTION USING BIOMOLECULAR SEQUENCES for M. Phil. Computer Science Scholar (2017 – 2018)

**Project #2:** Project on Data Mining - PREDICTING THE BIRTH OF HEALTHY BABIES WITH GESTATION PERIOD OBSERVATIONS USING MACHINE LEARNING ALGORITHMS for M. Phil. Computer Science Scholar (2018 – 2019)

**Project #3:** Project on Cryptography & Network Security - A HYBRID CRYPTOGRAPHIC SYSTEM BASED ON MATRIX ALGEBRA USING DNA SEQUENCES AND S-BOXES for M. Phil. Computer Science Scholar (2018 – 2019).

## Professional Experience

Period	No. of Years	Post Held	Name of the Institution
February 2020 to till date	3 Months	Assistant Professor	Urumu Dhanalakshmi College
June 2006 to October 2019	13 Yrs 4 Months	Assistant Professor	Shrimati Indira Gandhi College
June 2005- May 2006	1 Yr	Programmer	Shrimati Indira Gandhi College
September 2002- April 2003	8 Months	Guest Lecturer	D.G.G.A. College, Mayiladuthurai

## Software & Hardware Skills

Operating System : Windows, Linux, Android.  
Languages : C, C++, Java, Visual Basic.  
Web Technology : ASP, ASP. Net, Java Script, PHP, PHP Bootstrap,  
RDBMS : Foxpro, Oracle, Mysql, Mssql, Ms Access

Packages : Ms Office  
 Research Interest : Neural Networks, Machine Learning Algorithms,  
 Datamining tools & Cryptography algorithms

## Research Supervision / Project Guidance

Degree	Guided and Awarded
M. Phil.	09

## Confidential Work

- Appointed as External Examiner by Bharathidasan University to conduct UG practical examinations at various colleges.
- Appointed as External Examiner by Bharathidasan University for Conducting M. Phil. Viva Voce at various colleges.
- Recognized M.Phil. Guide of Bharathidasan University.
- Recognized Ph.D. Guide of Bharathidasan University.

## Invited Talk

Delivered a talk on the topic “WEKA for Datamining tasks” on 31<sup>st</sup> August 2019 at A.V. C. College of Engineering, Mayiladuthurai.

## Publications in Scientific Journals

Sl. No.	Title of Paper	Name of the Journal	Volume	Page No.	Year
1.	Predicting the Birth of Healthy Babies with Gestation Period Observations Using machine Learning Algorithm	International Journal of Computer Sciences and Engineering (UGC Approved Journal During Publication)	Vol. 7, Issue 3	271 - 275	2019
2.	A Hybrid Cryptographic Algorithm Based on Matrix Algebra Using DNA Sequences And S-Boxes	International Journal of Research in Electronics and Computer Engineering ISSN: 2348-2281(UGC Approved Journal during Publication)	Vol. 7 Issue 1	pp. 530 - 533	2019

3.	Encrypting Information Using DNA Sequences With Matrix Algebra	International Journal of Research In Electronics and Computer Engineering ISSN: 2348-2281(UGC Approved Journal during Publication)	Vol. 6 Issue 3	pp. 1586- 1590	2018
4.	Enhancing Information Encryption With Biomolecular sequences Using NDES Algorithm	International Journal of Advanced Research in Computer Science ISSN No. 0976-5697(UGC Approved Journal during Publication)	Vol. 8, No. 9,	482- 485	2017
5.	A New Approach To DNA Cryptography Using 8x8 Playfair Cipher and Ramanujam Square Matrix	International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2013): 6.14   Impact Factor (2015): 6.391	Vol. 5 Issue 8,	444- 446	2016
6.	Secure Message Transfer Using DNA Sequences	International Journal of Computational Intelligence in Bioinformatics ISSN: 0973-385X	Vol. 9, No.1	1-6	2016
7.	Cognition Enhanced ANN Model for The Detection of Rare Events in DNA Repeat Sequences	Advances in Computation Sciences and Technology ISSN 0974-4738	Vol. 6, No.1	33-45	2013
8.	Mathematical Lensing of DNA Repeat Sequences	International Journal of Computational Intelligence in Bioinformatics ISSN: 0973-385X	Vol. 3 No. 3	257 - 265	2010
9.	A Statistical Method for Verification of Rareness in DNA Sequences Using Sequence Encoding	Online Journal of Bioinformatics ISSN 1443-2250	Vol.10 Issue 1	74-81	2009

### Participation in Seminars/Conferences/Workshops

Sl. No.	Name of the Conference	Year
1.	Participated in two days National Level Workshop on “NAAC Awareness Programme” conducted by Primax Foundation at Bangalore on 27 <sup>th</sup> & 28 <sup>th</sup> July	2019
2.	One day Workshop on “Internet of Things and its Applications” at St. Joseph’s College, Tiruchirappalli on 15 <sup>th</sup> December.	2017
3.	One-Day workshop on “Android Application Development” at BUTP, Tiruchirappalli	2016
4.	One -Day Inter-Collegiate Workshop on “E-Content Development For Teaching – Learning Process” at Jamal Mohammed College, Tiruchirappalli on 22 <sup>nd</sup> December.	2015
5.	National conference on “Recent Trends in Engineering And Technology” organized by Sri Raja Rajan College of Engineering and Technology”, Karaikudi on 4 <sup>th</sup> February.	2013
6.	Third Inco-US Lecture Series on “Discrete Mathematical Chemistry : Special Lectures On Bioinformatics and Chemoinformatics” Organized by Department of Bioinformatics, Bharathidasan University, Tiruchirappalli during 7 <sup>th</sup> – 10 <sup>th</sup> January.	2008

### Presentations in Seminar/Conference

Sl. No.	Title of Paper	Name of the Conference	Page No.	Year
1.	Impact of Biological DNA Sequences in Augmenting Cyber Security *	International Conference on “Challenges and Response of Organization during Turbulent Global Business Environment” organized by Primax Foundation during 4 <sup>th</sup> June 2019 at Singapore.  ISSN No. 2394-2886	25 - 28	2019

2.	Enhancement of Teachers' Qualification to Achieve Excellence In Teaching*	National Conference on Impact of Assessment and Accreditation on Higher Professional Institutes (A2HPI) Organised by K. I. T. 's College of Engineering & Shivaji University, Kolhapur, Sponsored by NAAC Bengaluru during 13 <sup>th</sup> & 14 <sup>th</sup> January.	53-59	2017
3.	Cognition Improved Neural Network Scheme for Detecting Rare Motifs in DNA Sequences	International Conference on Intelligent Computing Applications, ICICA 2014 held during March 6 - 7, 2014 in Bharathiar University. Published in <b>IEEE Xplore – Digital Library</b> ISBN-13: 978-1-4799-3966-4	18-21	2014
4.	Message Encryption Using DNA Sequences <sup>#</sup>	International conference on “World Congress on Computing and Communicating Technology”, WCCCT’14 held during February 27 <sup>th</sup> to March 1 <sup>st</sup> 2014 at St. Joseph’s College, Trichy Published in <b>IEEE Xplore – Digital Library</b> <b>Print ISBN: 978-1-4799-2876-7</b>	182-184	2014
5.	Cloud Computing – Applications in Bioinformatics	National symposium on Cloud Computing organized by Bharathidasan University in association with Shrimati Indira Gandhi College and CSI Trichy chapter during 26 <sup>th</sup> Sep. 2012	17-25	2012
6.	Fortified Information Encryption with Biological Sequence Data	DST Sponsored National conference on Applications of Data Mining on National Security organized by Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Enathur, Kanchipuram during 30 <sup>th</sup> and 31 <sup>st</sup> August, 2010. ISBN:978-93-8697-51-2	76-81	2010
7.	An Artificial Neural Network Design for Detecting Rare Events In DNA Sequences	International Conference on "Recent Trends in Computing and Communication" organised by Dhanalakshmi Srinivasan College(W), Perambalur, 27th Feb. 2010.	64-70	2010

8.	A Novel Sequence Encoding Method for Searching Rareness Among Consensus DNA Sequences <sup>*</sup>	National Workshop sponsored by Department of Biotechnology (DBT) on Structural and Functional Genomics – an Insilico Approach held at Sub Distributed Information Centre (SUB DIC), Central Agricultural Research Institute (CARI), Port Blair, Andaman & Nicobar Islands during 26-28 February	54-60	2009
9.	A Computational Tool for Quantitative Comparison Of Relatedness of Two DNA Sequences	National Conference on Bioinformatic Tools for Gene and Protein Analysis at Shrimati Indira Gandhi College, Tiruchirappalli-2 during 7-8 September	33-37	2007
10.	Sequence Analysis- An Approach Using Finite Differences	State Level Seminar on Computer oriented mathematical Techniques 2007 (SLSCOMT-2007) at Shrimati Indira Gandhi College, Tiruchirappalli-2 during 10-11 August	19-25	2007

\* - **In Absentia**

# - **This work has received 16 external citations (as on 31.10.2019). Source : Google Scholar**

#### **Participation in Orientation/Refresher/Training/ Faculty Development Programmes**

<b>Sl. No.</b>	<b>Name of the Conference</b>	<b>Year</b>
1.	Attended a Faculty Development Programme on “Cloud Infrastructure and Services” Organized by ICTACT at K.Ramakrishnan College of Engineering, Tiruchirappalli from 20 <sup>th</sup> June to 24 <sup>th</sup> June	2016
2.	Attended a training programme on Android OS at SIGC, Trichy.	2013
3.	Attended an Orientation Programme at Kajamalai Campus, Bharathidasan University during 8 <sup>th</sup> May to 4 <sup>th</sup> June	2012
4.	Attended a skill based Training Programme on Multicore Programme Organized by ICT Academy during 9 <sup>th</sup> to 11 <sup>th</sup> March.	2011
5.	Attended a training programme on .Net at SIGC, Trichy	2010
6.	Attended a Regional Workshop on “MATLAB & SPSS” organized by St. Joseph’s College, Tiruchirappalli during 13 <sup>th</sup> & 14 <sup>th</sup> March.	2009