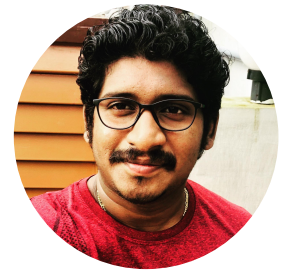# Dr. Shailesh Sivan

AI/ML Enthusiast • Researcher • Educator

@ shaileshsivan@gmail.com   📞 +91 8907230664   📍 Alappuzha

🌐 shaileshsivan.info   🐦 @SivanShailesh   in shaileshsivan   🐙 github.com/shailooz

SUMMARY

I'm a technology evangelist / educator / researcher having relevant experience in both academic and industry. The core area of interest includes different Artificial Intelligence and Data Science domains like Deep Learning, Computer Vision, Machine Learning, NLP , Data Mining, Soft Computing. I'm also interested in programming and algorithmic domain. I have cracked and qualified UGC NET / JRF, GATE exams several times. I'm Looking forward to excel in the field of technology research and development, which is going to transform the digital era.

EXPERIENCE

ASSISTANT PROFESSOR

DCS, Cochin University of Science and Technology

📅 OCT 2021 – till date   📍 Ernakulam, Kerala

- Teaching students pursuing Masters in Technology specialized in Software Engineering and Computer and Information Science
- Carry out research activities.

POST-DOCTORAL RESEARCH ASSOCIATE

Knowledge Media Institute, Open University

📅 Sep 2021 – Oct 2021   📍 Milton Keynes, United Kingdom

- Work associated with project "Cultural Heritage Knowledge Graphs" funded by EU Horizon 2020 Programme

RESEARCH FELLOW

DCA, Cochin University of Science and Technology

📅 Dec 2017 – May 2021   📍 Ernakulam, Kerala

- Thesis : **Computational Framework for Identification of Spatio-Temporal Patterns in Classical Dance using Machine Learning Techniques.**
- Design Development and Deployment of Artificial Intelligence, Machine Learning, Deep Learning and Data Science Project

ASSISTANT PROFESSOR

Sacred Heart's College, Thevara

📅 Jun 2016 – Nov 2017   📍 Ernakulam, Kerala

- Working as Asst. Professor in Computer Science Department. Teaching students doing Bachelor's degree in Computer Application specialization in Cloud Computing and Mobile Application Development
- Handling IT papers of Non -IT PG programmes

EDUCATION

Ph. D.
Computer Science

📅 2017 - 2021   📍 CUSAT

M.Sc.
Mathematics

📅 2016-2018   📍 Madras University

M.Tech.
Computer and Information Science

📅 2013 – 2015   📍 CUSAT

B.Tech.
Computer Science and Engineering

📅 2008 – 2012   📍 Kerala University

MOST PROUD OF

🏆 **Young Scientist/Researcher Award 2020**
Acheived Young Scientist/ Researcher award in institutional level among different departments, presented by Sacred Heart College, Thevara.

🎓 **Junior Research Fellowship (JRF)**
Qualified NET 2019 for eligibility of Junior Research Fellowship.

🎓 **Qualified NET 2017,2018,2019**
Qualified NET for eligibility of Assistant Professor.

🎓 **Qualify Gate 2018, 2017, 2016, 2013**
Cracked GATE four times in 2018, 2017, 2016, 2013 with **scores 563, 484, 501, 424** respectively.

🏆 **Rashtrapathi Scout Award (President Scout Award)**
Achieved Rashtrapathi Scout Award or President Scout Award for recognising the best performance of scouts at National Level

SENIOR SOFTWARE ENGINEER

Travancore Analytics, Athulya Infopark Kakkanad

📅 Jan 2016 – June 2016   📍 Kochi, Kerala

- I was working with C++ application development team. Involved in the analysis, designing, development, testing, and deployment phases of the project "REMO".

SENIOR SOFTWARE ENGINEER

Techgentsia Software Technologies Pvt.Ltd ,Infopark Cherthala

📅 Aug 2012 – Dec 2015   📍 Cherthala, Kerala

- I was working in the C++ application development team of Techgentsia Software Solutions for developing Windows Client Applications. Scope of work includes designing developing C++ applications and customizing Fire breath Plugins for video conferencing and other collaboration tools.

CONSULTANCY SERVICES

- Logidots Technology P.V.T Ltd. - As AI/ML project consultant for designing and developing of AI/ML solution for several projects and also for managing agile software engineering process.
- Indocosmo System PVT. Ltd. - As Deep Learning consultant for the AI/ML module for a retail market project
- Techgentsia Software Technologies Pvt.Ltd - As Computer Vision and Deep Learning Consultant for a ID Card fake detection module of Banking Software.

JOURNAL PUBLICATIONS

[SCOPUS] "Handoff Delay Optimization Using Hybrid Prediction Model" in International Journal of Networked and Distributed Computing, Vol. 6, No. 2 (April 2018) 99-107, Atlantis Press

[SCOPUS, ESCI] "Computational Framework with Novel Features for Classification of Foot Postures in Indian Classical Dance" in Intelligent Decision Technologies: An International Journal Volume 14 (2020) Page : 119–132, IOS Press

[SCOPUS] "Automatic Annotation Of Dance Videos Based On Foot Postures" in Vol. 11 No. 1 Jan-Feb 2020, Indian Journal of Computer Science and Engineering, Engg Journals Publications

[SCIE]Accepted paper titled **"Understanding Dance Semantics using Spatio-Temporal Features Coupled GRU Networks"** in Entertainment Computing Elsevier

"Compression Strength Prediction Using Machine Learning Techniques" in International Journal of Advanced Trends in Computer Science and Engineering, Volume 10 No.1 January - February 2021

CONFERENCES

🏆 **Winner of Technical Competitions**
Achieved 1st place in Application Software Development Competition, Paper Presentation Competition at different inter collegiate Technical Festivals
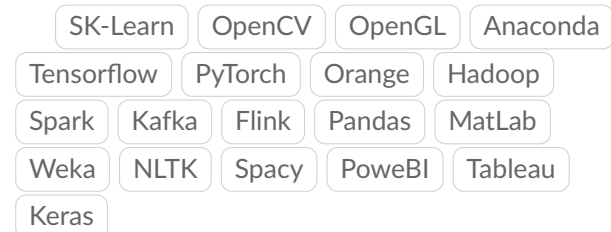
🏆 **Being a Classical Dancer**
Trained classical dancer and achieved lot of victories in different art festivals

AREA OF EXPERTISE

- Experience with Multi-GPU environments : 10 X GPU based high performance work stations
- Image and Video Processing, Computer Vision.
- Deep Learning - CNN, RNN, LSTM, Semantic Segmentation, Localization, Auto Encoders and other functional models
- Machine Learning - Support Vector Machine, Neural Networks, Probabilistic Model, KNN, Random Forest, K-Means
- Big Data Processing with Hadoop, Spark, Kafka
- Experience with high performance hadoop cluster : Cluster Supports Hortonworks Data platform, HDP 3.0
- Computational Linguistics, Data and Text Mining, NLP
- Soft Computing - Genetic Algorithm, Swarm Intelligence, Fuzzy Logic

TECHNICAL SKILLS

AI/ML and DataScience Frameworks

SK-Learn   OpenCV   OpenGL   Anaconda
Tensorflow   PyTorch   Orange   Hadoop
Spark   Kafka   Flink   Pandas   MatLab
Weka   NLTK   Spacy   PoweBI   Tableau
Keras

Web Application Frameworks

AngularJS   ReactJS   Django   Flask
NodeJS   ASP.NET   JQuery   BootStrap

Programming Languages and Scripts

Python   R   C   C++   Java   C#
Visual C++   Android   JavaScript   JSP
PHP   HTML   CSS   JSON   XML

Database Technologies

MySQL   Oracle   MSSQL   SQL Lite
PostgreSQL   Workbench   PhpMyAdmin
MongoDB   MariaDB
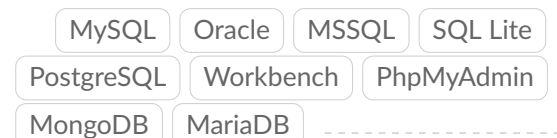
Advanced Session Password Authentication for Blind Computer Users in Proceedings of International Conference on Information Science(ICIS-2014)

- -

[SCOPUS] Clustering DNA Sequences of Aspergillus Fumigatus Using Incremental Multiple Medoids in IEEE Conference Publication for 5th International Conference on Advances in Computing and Communications (ICACC-2015)

- -

[SCOPUS] Incorporating Homomorphic Encryption with Hybrid Numerical Authentication for Blind Computer Users in IEEE International Conference on Intelligent Computing, Instrumentation & Control Technologies (ICICICT-2017)

- -

[SCOPUS]Optimization of Handoff Delay and Location Prediction of Mobile Station using GPS Integrated SIM Module in Cellular Networks in IEEE International Conference on Intelligent Computing, Instrumentation & Control Technologies (ICICICT-2017)

- -

An efficient and Secure BST based Indexing of Encrypted Trigrams During Fuzzy Keyword Searching on Cloud in Proceedings of National Conference on Emerging Technologies in Computer Science (NCETCS-19)

- -

A Novel Approach To Sketch Based Image Retrieval Using Unsupervised Learning And Shape Descriptors in Proceedings of National Conference on IoT 2020)

- -

[SCOPUS][BEST PAPER AWARD] Capsule Networks for Classifying Conflicting Double-Handed Classical Dance Gestures in 4th International Conference on Data Engineering and Communication Technology(ICDECT) 2020 **(Springer)**

- -

[SCOPUS] Classification of Sequence Data Using LSTM:An Application on Chaotic Sequences in International Conference on Modeling Simulation and Optimization 2020
(CoMSO2020) **(Springer)**

- -

[SCOPUS] Survey on Deep Learning Techniques Used for Classification of Underwater Sonar Images in International conference on iot, social, mobile, Analytics and cloud in computational vision and bio-engineering (ISMAC - CVB 2020), **(SSRN ELSEVIER)**

- -

[SCOPUS] Yoga Asana Identification: A Deep Learning Approach in Second Annual International Conference on Data Science, Machine Learning and Blockchain Technology, **AICDMB 2021 (IOP Conference Series: Material Science and Engineering)**

- -

[SCOPUS] A Survey on Surface Crack Detection of Concretes Using Traditional, Image Processing, Machine learning and Deep Learning Techniques in **IEEE International Conference on Communication, Control and Information Sciences (ICCISc-2021)**

INTERNATIONAL BOOK CHAPTER

Project and Code Management

Agile | GIT | SVN | Jira | Doxygen
Bitbucket | Unit testing

WORKSHOPS & TALKS

- Three day Workshop on **Deep Learning** for trainers– Saintgits College of Engineering, Kottayam

- Workshop on **Bigdata Analytics Using Spark** – DDUK CUSAT

- One-day workshop on **Introduction to Latex using Overleaf** – **Providence College of Engineering**

- Webinar on **Data and Business Analytics** – **BIZ' Talkathon 1.1. IMT Punnapra**

- Webinar on **Unravelling Machine Learning** – **Geek Talkathon 1.1. CEM Punnapra**

- Two Day online Hands-on Workshop on **Python Programming** – **M.I.R.O.S.I**

- Five Day online Hands-on Workshop on **Python for Data Science** – **St. Theresas College , Ernakulam**

- Two Day online Hands-on Workshop on **Machine Learning** – **CUSAT Students Union, CUSAT, Kalamaserry**

- Webinar on **Introduction to Machine Learning** - **University Institute of Technology , Alappuzha**

- Three day national workshop on **Python and Latex** - **Sree Shankara College, Kalady**

- Faculty Development Programme on **Research Methodology in Computer Science** for - **Naipunaya School of Management, Cherthala**

- Five day Online Faculty Development Programme on **Image processing and Computer Vision** for **College of Engineering Kidangoor** - **SITTTR Kalamasery**

- Five Day online Hands-on Workshop on **Machine Learning using Python**. – **Govt Engineering College, Idukki**

- International workshop on **Machine Learning Applications** - **SJCET Pala**

- Five day Online Faculty Development Programme on **Machine Learning** for **Polytechnic Faculties** - **SITTTR Kalamasery**

- Five day Online National Webinar on "**Python Programming** - **Mary Matha Arts and Science**

"Capsule Networks for Classifying Conflicting Double-Handed Classical Dance Gestures" in Data Engineering and Communication Technology- Springer , ISSN - 2367-4512, DOI - 10.1007/978-981-16-0081-4

- -

"Classification of Sequence Data Using LSTM:An Application on Chaotic Sequences" in Modeling, Simulation and Optimization - Springer , ISSN - 2190-3018, DOI - 10.1007/978-981-15-9829-6

AS REVIEWER

- Entertainment Computing - Elsevier (Impact Factor - 1.341, SCIE)
- Proceedings A, Mathematical , Physical and Engineering Sciences - The Royal Society Publishing (Impact Factor - 2.78, SCIE)

PATENTS

(R) **Filed patent on the invention VOICE ASSISTED OBTUSE ATM in Indian Patent Journal with reference number 202041029173**

The design and development in the field of usable security have not considered people with disabilities. To carry out transactions like banking, people with vision impairment are facing a lot of challenges as they do not have a dedicated system to assist them. This study proposes a voice-assisted obtuse ATM designed specifically for blind people. The proposal put forward a two-layer authentication mechanism that prevents several types of security breaches. Numerical values assigned by the user for a set of audio clips along with a random generated secret expression is kept as the security credentials. These credentials are encrypted using fully homomorphic encryption and saved in the authentication server which prevents server attacks. Using this method, a user is able to generate a session password for each login to access this ATM. For enhancing the security as well as usability a gadget device is also developed.

LANGUAGES

English
Malayalam
Hindi
Tamil

PERSONAL INFO

Date of Birth	:	04th July 1990
Gender	:	Male
Marital Status	:	Married
Address	:	Sreeshylam, Devaswamparambu, Thiruvampady P.O, Alappuzha, Kerala
Nationality	:	Indian
Father's Name	:	SIVAN M
Passport No.	:	K4296368

College, Mananthavady, Wayanad

- Three day Online hands-on workshop on "**Python Programming** - **St.Joseph College**, Kannur

- Webinar on session "**Machine Learning : Transforming Digital World**" - **Marthoma College of Science and Technology, Ayur, Kollam**

- Webinar on "**Deep Dive into Machine Learning**" as a part for Faculty Development Programme - conducted by **Division of Information Technology - School of Engineering , Cochin University of Science and Technology**

- Webinar on session "**Machine Learning : Transforming Digital World**" - CHMKM Government Arts and Science College, Tanur, Malapuram

- Delivered talk on Webinar session "**Robotics in Daily Life**" - THE Indian Community School, Kuwait

- Five day Online hands-on workshop on "**Machine Learning using Python**" - **Division of Information Technology - SOE , CUSAT**

- One day hands-on workshop on "**Introduction to Machine Learning**" - **Vimala College, Thrissur**

- Three day hands-on workshop on "**Basic Machine Learning**" - **College of Engineering, Thrikaripur**

- Corporate training on "**Deep Learning for Computer Vision and Image Processing**" for **Software Developers at Indocosmo Systems Pvt. Ltd.**

- Two-day Hands-on Workshop on **Practical Machine Learning using Python.** – **Sacred Heart Colleg**e, Thevara

- One day session on '**Introduction to Machine Learning & Artificial Intelligence**' Kerala Police Academy

- **Two-day Workshop on Practical Machine Learning** – Computer Application Department, CUSAT

- One day session on '**Introduction to Machine Learning & Artificial Intelligence**' - **Kerala Police Academy**

- Two-day Hands-on Workshop on **Machine Learning using Python.** – FOSS CELL, **Govt Engineering College, Idukki**

- Five- day workshop on **Deep Learning** – **DCA CUSAT**

- Two-day Hands-on Workshop on **Machine Learning using Python.** – **College of Engineering Aranmula**