



Dr. Ajit Kumar

Interest: Opensource, Python, Data Science, Information Security, Malware

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EDUCATION

- **Pondicherry University** Pondicherry, India
Doctor of Philosophy in Computer Science & Engineering Sept 2012- May 2018
- **Pondicherry University** Pondicherry, India
Master of Science in Computer Science; CGPA: 8.00 Aug. 2009 – July. 2011
- **Indira Gandhi Open University** Study Centre: St.Xavier, Patna, Bihar
Bachelor of Computer Application; Percentage: 68% June. 2006 – June. 2009
- **Pondicherry University** Pondicherry, India
PG Diploma in Statistical & Research Methods; Percentage: 80% 2014-15
- **Indira Gandhi Open University** Study Centre: BIT, Bangalore, Karnataka
PG Diploma in Information Security; Percentage: 74.25% 2015-16
- **University of Michigan** MOOC
Python Specialization, Python For Everybody - Spring Graduation- 2016

LECTURESHIP QUALIFICATION

- **UGC-NET** June 2014
Eligibility Test for Assistant Professor / Lectureship conducted by UGC. 62.86%
- **TSET** 2012
Tamilnadu State Eligibility Test , for Assistant Professor / Lectureship 69.71%
- **APSET** 2012
Andhra Pradesh State Eligibility Test , for Assistant Professor / Lectureship 70.28%
- **RSET** 2012
Rajasthan State Eligibility Test, for Assistant Professor / Lectureship 78.74%

RESEARCH

- **International Journals** Published/Accepted- 5
- **International/National Conference** Published-5
- **Article in Magazine** Published- 1

Peer Reviewed & Indexed International Journals

1. **Ajit Kumar**, K.S Kuppusamy, and G. Aghila, FAMOUS: Forensic Analysis of MOBILE Devices Using Scoring of application permissions, Future Generation Computer Systems,2018, Elsevier, <https://doi.org/10.1016/j.future.2018.02.001>, ISSN: 0167-739X.**Impact Factor: 3.997**
2. **Ajit Kumar**, K.S Kuppusamy, and G. Aghila, A learning model to detect maliciousness of portable executable using integrated feature set, Journal of King Saud University - Computer and Information Sciences,2017, Elsevier, ISSN: 1319-1578.
3. Abid Ismail,K.S Kuppusamy, **Ajit Kumar**, Pawan Kumar Ojha, Connect the Dots : Accessibility, Readability and Site Ranking - An Investigation with Reference to Top Ranked Websites of Government of India, Journal of King Saud University - Computer and Information Sciences,2017, ISSN: 1319-1578, Elsevier.
4. **Ajit Kumar**, K.S Kuppusamy, and G. Aghila,Features for Detecting Malware on Computing Environments, IJEACS Volume : 01, Issue: 02, December 2016 ,Empirical Research Press,UK
5. **Ajit Kumar**, K.S Kuppusamy, and G. Aghila, CASroid: A two level certification framework for building trust in third party android application stores,International Journal of Information Security Science, (provisionally accepted) ISSN: 2147-0030

International Conference Publications

6. **Kumar, Ajit**, and G. Aghila. Portable executable scoring: What is your malicious score?. Science Engineering and Management Research (ICSEMR), 2014 International Conference on. IEEE, 2014.
7. **Ajit kumar**, G. Aghila, PoToMAC: A Pre-processing Tool for Malware Classification, In proceedings of ICIIT 2014, Chennai, India.
8. **Ajit Kumar**, Pramod Sagar K, K.S.Kuppusamy,Aghila G.,Machine learning based Malware Classification for Android Applications using Multimodal Image Representations, 10th International Conference on Intelligent Systems and Control (ISCO), 2016
9. Gunikhan sonowal, K.S Kuppusamy, and **Ajit Kumar**, Usability Evaluation of Active Anti-Phishing Browser Extensions for Persons with Visual Impairments, FOURTH INTERNATIONAL CONFERENCE ON ADVANCED COMPUTING AND COMMUNICATION SYSTEMS(ICACCS 2017), IEEE
10. P.G Preethi, V. Uma, **Ajit kumar**, Temporal Sentiment Analysis and Causal Rules Extraction from Tweets for Event Prediction, ICCS 2014, Elsevier procedia.

Article in Magazine

1. Ajit Kumar, PEEPING INSIDE ANDROID APPLICATIONS: REVERSE ENGINEERING WITH ANDROGUARD, Hackin9: IT security Magazine, Volume:13, No:2.

EXPERIENCE

- **Central University of Tamilnadu** Thiruvavur,Tamilnadu, India
Assistant Professor- On Contract *July 2017- December 2017*
- **Smart and Secure Environment Lab** Pondicherry, India
Research Assistant *6 Months*
- **Maventic** Bangalore, India
Software Engineer -Intern *Jan 2011 - July 2011*
 - **ABAP Development:** Develop SAP project with ABAP programming and testing the project modules.
- **Pondicherry University** Pondicherry, India
Research and Teaching Assistant *Sept 2012 onwards to July 2017*

- **Research - Ph.D. Thesis: A Framework for Malware Detection with Static Features using Machine Learning Algorithms:** Study malware detection methods and incorporate machine learning to develop a non-signature based malware detection solution. Used different Python frameworks and modules such as sklearn, yara, Pefile etc.
- **Teaching as Guest or Assistant - Data Mining and Network security :** Explain fundamental of Data mining algorithms and help student with practical using sklearn Python machine learning framework.

TECHNICAL PROJECTS

- **Browsing History and Bookmarks Visualization:** Data Visualization of Browsing history and bookmarks data using Python to analyse user's browsing behaviours and interests.
- **URL verifier:** Capturing network traffic and extracting url and verify it for maliciousness. Implementation done with Python and its different modules.
- **Research Projects-I:** Build a Machine Learning based malware classification for Windows' Portable Executable files. The project involves tasks like, malware and benign sample collection, pre-processing, feature engineering, training and testing various Machine Learning Models.
- **Research Projects-II:** Build an Android's Apk analyzer GUI tool with wxPython having a Machine Learning based classifier at the back-end. This project includes all tasks from research to product development.

INVITED TALKS AND WORKSHOP

- **Resource Person: Cashless India:Digital Payment Methods :** One Day workshop on Digital India Initiatives organized by Department of Computer Science, Central University of Tamilnadu on 7 October 2017
- **Resource Person: Mendeley: Documents and Reference Manager tool :** A National Workshop on Software Tools for Digital Document Management Organized by Department of Computer Science and Engineering, National Institute of Technology Puducherry, Karaikal on 12 November 2016.

ATTENDED WORKSHOP/SHORT-TERM COURSE

- **National Workshop (6 Days) :** Network Tools & Open Source, WONTOS 2012, 17-22 Dec, 2012, Department of Computer Science & Computer Center, Pondicherry University.
- **Summer Programme (13 Days) :** Cyber Security and Computer Forensics, 3-15 June, 2013, School of Computer and Information Sciences, University of Hyderabad.
- **International Workshop(9 Days):** Machine Learning and Text Analytics, 15-23 Dec, 2013, South Asian University, New Delhi, India
- **Online Course (18 Days) :** Microwave Radar Remote Sensing and its Applications, 10-27 April , 2017, ISRO.
- **Faculty Development Program(10 Days):** Secure System Engineering, 5-14 Dec, 2017, Department of Computer Science and Engineering, IIT Madras.
- **GIAN Course (5 Days):** Radiomics, Pathomics and Deep Learning for Disease Diagnosis, Prognosis and Treatment Evaluation on Digital Pathology, CT and MRI scans, 26-30 December, 2017, Sri Jayachamarajendra College of Engineering, JSS Technical Institutions Campus Mysuru.
- **GIAN Course (5 Days):** Big Social Data Analysis, 26 Feb -2 March, 2018, IIT Patna.

TRAINING

- **Mendeley Advisor, Pondicherry University:** Give training workshop and personnel assistant on, "How to use Mendeley?" for Digital documents management and research purposes. Helping end user by troubleshooting technical issues raised by use of Mendeley.
- **Python Programming:** Under open-source promotion and support initiative, give workshop and training on Python programming to college students on weekends and holidays. (Internal)
- **Information Security Awareness :** Give small talks and discussions to make end-users aware of different type of Cyber attacks and introduce them best practices to be safe online. (Internal)

PROGRAMMING SKILLS

- **Languages:** Python, Javascript, C, SQL, PHP
- **Framework:** Django, Flask, sklearn, skimage