

Aashka Kishor Raval

Department: Computer Science and Engineering

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Research Profiles: [Google Scholar](#), [researchgate.net](#)

Reviewer Profile: Reviewed few Springer journal's and conference

EDUCATIONAL QUALIFICATIONS:

- 2020 – 2022: **M.Tech**, Computer Science (Specialization: Cyber Security),
[Pandit Deendayal Energy University, Gandhinagar, India.](#)
Thesis: Generating an IoT base device for Malware Detection (**CGPA: 9.6**)
- 2007 – 2011: **B.Tech**, Information Technology, L.J Institute of Technology, GTU, India.
(**CGPA: 8.5**)
- 2007: **Diploma**, Information Technology, [Dalia Institute of Diploma Studies, GTU, India.](#)
(**CGPA: 9.2**)
- 2005: **10th**, High School Examination, [Nelson's Higher Secondary School, India.](#) (**60 %**)
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CURRENT APPOINTMENT:

2022 – till date: Ad-hoc Faculty, Pandit Deendayal Energy University, Gujarat, India

SUMMARY STATEMENT:

Aashka Kishor Raval received M.Tech degree in Cyber Security from Pandit Deendayal Energy University, Gandhinagar, India, in 2022. She was working for multiple ed-tech companies to train students and professional in Cyber Security. Currently, she is working as Ad-hoc faculty in the Department of Computer Science, Pandit Deendayal Energy University, Gandhinagar, India. She has authored/co-authored **a journal and an IEEE conference paper**. She has few of her papers under review and is guiding few research groups,

At the beginning of her research career during Masters Degree, she has proposed few methodology to stop cyber-attacks that are affecting common people, further she worked on multi-disciplinary attacks on smart city, power grid, IoT device security, Encryption based algorithm generation. Her thesis focused on developing a new IoT based device for malware detection, the device successfully detected few of the malware and its pattern. She has developed successful grip on delivering sessions and working with many cyber security and digital forensics tools.

TEACHING:

Teaching Philosophy:

My teaching philosophy is based on active and reflective learning strategy which would foster thoughtful, critical, engaged, independent thinkers and writers. I will create an environment where respectful debate is encouraged and make every effort to set clear grading standards, offer intentional feedback, and connect students to supportive services. I would like to see myself as a co-learner and constantly try to grow, adapt, and respond to the diversity of the classroom. My approach to teaching will enable me to learn as much from my students as they do from me. I will be creative and develop learning environments that will help my students synthesize and apply key course concepts.

I believe teaching and research should be equally emphasized. I will integrate recent research findings to enhance the teaching. I have been following this philosophy in my academic career. I am mentoring over 20 under-graduate students in my on-going teaching career as an Ad-Hoc Professor at Pandit Deendayal Energy University , Gandhinagar.

Inclusion of personal research in curriculum design

- Design of learning activities around recent-art research issues
- Assignments to build small-scale research activities

RESEARCH:

Research Interest:

My general research interests lie in the area of Cyber Security and areas connecting to it. After I got a large exposure for research in the field of Cyber Security in my Masters and teaching career, I have decided to pursue research in this field as a career option. Taking forward with PhD. In particular, a unifying theme of my research is the development of new methodologies and algorithm for cyber-attack and prevention along with new era encryption algorithm generation.

M.Tech Thesis Title: *Development of an IoT based device for Malware Detection*

[Aug 2021 to April 2022]

Supervisor: Dr. Nishant Doshi, Pandit Deendayal Energy University

Abstract: The ubiquity of the internet has shrunk the world, fostering global connectivity, especially evident during lockdowns. However, this connectivity has also given rise to cybersecurity threats, with a significant challenge being the lack of awareness regarding data-leaking malware.

This research project focuses on empowering users to identify and understand data-leaking malware through lightweight machine learning programs and Python libraries. The primary aim is to develop an intuitive IoT device capable of recognizing distinct patterns associated with data leaks. The device, using LED indicators or buzzers, provides timely warnings to users, enhancing their ability to respond effectively.

By bridging the gap between cybersecurity complexities and user understanding, this project aims to bolster individual cybersecurity defenses against evolving cyber threats.

Ongoing Research :

DeepGuard: A Robust Framework for Image-Based Malware Detection

- We are working on a dataset with different algorithm to detect the malware from the image-based files this will work as static methodology for detecting malware.

Deepfake Detection: A Comprehensive Review of Multifaceted Approaches and Algorithmic Strategies

- The project is about testing and reviewing all the algorithms and methods provided for deepfake detection on some common points and providing a value output based on accuracy of detection.

Advancements in Remote Data Acquisition: A Methodological Exploration for Digital Forensics Investigations

- The project is about creating a methodology, application or tool that helps in remote acquisition of files and data in the field of digital forensics.
- My future plans involve continuing my work toward the two previously stated goals through the use of innovative and collaborative research methods. Ultimately, I will disseminate my research findings through a different way, including academic publications, a book chapter publication for the professional audience, and conducting workshops and seminars targeting academicians/industrialists.
- My long-term research agenda involves an expansion of my research area to more thoroughly understand the role of community culture and expectations as well as the societal interest that potentially play a role in minimizing several issues. In keeping with my past and current research experiences, I will also continue to incorporate undergraduate students in my research projects.

PUBLICATIONS:

- Cyber Awareness for Dummies (Published as Lect. Notes Electrical Eng., Vol.936)
Paper link: https://link.springer.com/chapter/10.1007/978-981-19-5037-7_77
- Understanding people's awareness towards social engineering with survey (Published in 2022 IEEE 2nd international Symposium on Sustainable Energy, Signal Processing and Cyber Security (SSSC 2022) Supervisor: Dr. Debabrata Swain
Paper link: <https://ieeexplore.ieee.org/document/10051531>

Under Review

- A Comprehensive Survey on Cyber Fraud Targeting Common Individuals: Insights into the Dynamics of Phishing Attacks
- Empirical Survey on State-of-the-Art Hate Speech Detection
- Methods from various perspectives
- Air Quality Index Forecasting Using Long Short-Term Memory (LSTM) Networks: A Data-Driven Approach for Improved Prediction Accuracy
- A Review: Implementation of Partially Homomorphic Encryption and Fully Homomorphic Encryption on Cloud Computing
- Distributed Denial of Service (DDoS) Prevention Techniques: A Comprehensive Review of Strategies, Challenges, and Emerging Innovations

PROFESIONAL EXPERIENCE:

Pandit Deendayal Energy University, India 2023

Ad-Hoc Professor, Computer science department

Careernow, US 2023

Cyber Security Trainer(contractual/part-time)

SIEM Intelligence, India 2023

Cyber Security Trainer(contractual)

CAREERERA, US 2023

Cyber Security Trainer (part time)

IT TALENT HUB , England 2023

Cyber Security program developer and trainer(part-time)

HaxSploit, India 2022-23

Cyber Security Business Associate and Trainer(freelancer/contractual)

Edu-Vitae, India 2018 - 2023

Ethical Hacking Intern Co-ordinator for IIT Kanpur, Bhuvneshwar and Guwahati(Freelancer/Contractual)

PERSONAL DETAILS

- **Date of Birth:** 16th -February-1994
 - **Father's and Mother's Name :** Kishor Raval and Bijal Raval
 - **Marital Status:** Unmarried
 - **Languages Known :** English, Hindi and Gujarati
 - **Sex :** Female
 - **Nationality :** Indian
 - **Permanent Address:** Aashka Raval, B-9/1 Vaikunth Complex, Nr. Cadila Bridge, Ghodasar, Ahmedabad, Gujarat, Pin-380050, India
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REFEREES:

Dr. Nishant Doshi

(M.Tech. Supervisor)

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Dr. Payal Chaudhari

(Research Advisor)

Asst. Prof., Department of Computer Science, PDPU Gandhinagar, Gujarat, India, 382007

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Dr.Nayantara Kotoky

(Research Project Evaluator)

Postdoctoral Researcher, Machine Learning, Neuroscience, Fraunhofer Institute for Industrial Engineering IAO

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