

# Ramesh Paudel

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🔗 <https://github.com/rpaudel42>

## EDUCATION

- 2016–Present **PhD Candidate in Computer Science**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Machine Learning, Data Mining, AI, Graph-based Anomaly Detection, Concept Drift Detection
- 2012–2014 **Masters in Computer Science**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Specialized in Data Mining and Machine Learning
- 2007–2010 **Bachelor in Information Technology**, PURBANCHAL UNIVERSITY, Nepal.





## EXPERIENCES

- 2016–Present **Research Assistant**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Actively working on research related to anomaly/fraud detection in healthcare and social network, concept drift detection, graph streams classification, change detection on time-series, and time-series forecasting.
- 2018 **Instructor**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Course taught: **Discrete Mathematics**
- 2016 **Lab Instructor**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Course conducted: **Data Structure and Algorithms**
- 2014–2016 **Data Analyst/Software Developer**, BESPOKE HOUSE INC., Boston.
  - Analyze web, social media and search data using SQL and Google Analytic.
  - Analyze booking and buying pattern for hotels and suggest marketing campaign.
  - Assemble, monitor and develop search engine optimization campaigns.
  - Develop real estate and boutique hotel websites using Asp.Net platform.
- 2012–2014 **Teaching Assistant**, TENNESSEE TECH UNIVERSITY, Cookeville, TN.  
Assisted Courses: Data structure/algorithm, Computer Programming
- 2012 **IT support**, COLLEGE OF ENGINEERING, TTU, Cookeville, TN.
- 2010–2012 **Software Developer**, MIDAS TECHNOLOGIES, Kathmandu, Nepal.
  - Develop report interface, laboratory, medical record & OT module of Hospital Management Info. System.
  - Verify, process, and analyze the HMIS data.
  - Provide report/feedback to government agencies/hospitals on coverage and quality of health services.

## TECHNICAL SKILLS

- Language Python, R, SQL, Asp.Net, C#, Java, C++, Php, LaTeX, Javascript, HTML, CSS
- Tools Tensorflow, Keras, Scikit-learn, Numpy, Scipy, Pandas, Matplotlib, Tableau, Weka, Orange, Git/GitHub, Google Analytic, Rabbitmq, Jupyter
- Database MySql, Oracle, SQL Server
- Others Data Mining, Machine Learning, Time-series Analysis, Graph Mining, Data Structures/Algorithms

## PUBLICATIONS

- 2019 **Ramesh Paudel**, Prajjwal Kandel, and William Eberle, “Detecting Spam Tweets in Trending Topics using Graph-Based Approach”, *Accepted at: Future Technology Conference - 2019*, .
- Ramesh Paudel**, Peter Harlan, William Eberle, “Detecting the Onset of a Network Layer DoS Attack with a Graph-Based Approach”, *In Proceedings of the FLAIRS Conference 2019*, .
- 2018 **Ramesh Paudel**, William Eberle, Lawrence Holder, “Anomaly Detection of Elderly Patient Activities in Smart Homes using a Graph-Based Approach”, *In Proceedings of 2018 International Conference on Data Science*, .
- Ramesh Paudel**, Kimberlyn Dunn, William Eberle, Danielle Chaung, “Cognitive Health Prediction on the Elderly Using Sensor Data in Smart Homes”, *In Proceedings of the FLAIRS Conference 2018*, .

- 2017 **Ramesh Paudel**, William Eberle, Doug Talbert, “Detection of Anomalous Activity in Diabetic Patients Using Graph-Based Approach”, *In Proceedings of the FLAIRS Conference*, [📄](#).
- Poster **Ramesh Paudel**, William Eberle, “An Approach For Concept Drift Detection in a Graph Stream Using a Discriminative Subgraph”, *In Proceedings of Student Research and Creative Inquiry*, 2019.
- Ramesh Paudel**, James Park, and William Eberle , “Mining Heterogeneous Graph for Patterns and Anomalies”, *In Proceedings of Student Research and Creative Inquiry*, 2018.
- Ramesh Paudel** and William Eberle , “Mining Twitter Network for Interaction Patterns”, *In Proceedings of Student Research and Creative Inquiry*, 2014.

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## PRESENTATIONS

- Research Paper Presentation**, *The Thirty Second International FLAIRS Conference*, FL, 2019.
- Research Poster Presentation**, *The 14th Annual Research and Creative Inquiry Day*, Tennessee Tech University, 2019.
- Research Paper Presentation**, *International Conference on Data Science*, Las Vegas, NV, 2018.
- Research Poster Presentation**, *The 13th Annual Research and Creative Inquiry Day*, Tennessee Tech University, 2018.
- Research Presentation**, on "Anomalous Activity Detection in Smart Homes using a Graph-Based Approach", at the Graduate Student Seminar, 2018.
- Research Paper Presentation**, *The Thirtieth International FLAIRS Conference*, FL, 2017.

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## RESEARCH INTERESTS

- o Machine Learning
- o Artificial Intelligence
- o Graph Mining
- o Graph Stream Classification
- o Anomaly/Fraud Detection
- o Graph-based Anomaly Detection
- o Time-series Analysis
- o Concept Drift Detection

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## CONFERENCES AND WORKSHOPS

- The Future Technologies Conference (FTC 2019)**, San Francisco, CA 2019.
- The 32<sup>nd</sup> International FLAIRS Conference**, Sarasota, FL 2019.
- The International Conference on Data Science (ICDATA)**, Las Vegas, NV 2018.
- The 30<sup>th</sup> International FLAIRS Conference**, Sarasota, FL 2017.

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## PROJECTS

- 2019 **Predicting Highest Growth Customer**, [📄](#).
- Prediction of Job Apply Rate for User Visiting Glassdoor**, [📄](#).
- 2017 **Anomaly Detection in Opioid Prescription**, [📄](#).
- Analysis of Pattern Learning and Anomaly Detection on Streams**, [📄](#).
- 2014 **LINKCUBE: A Tool for Anomaly Detection in Social Network using GBAD**, [📄](#).

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## AWARDS, HONORS, AND GRANTS

- Best Research Poster**, *An Approach for Concept Drift Detection in a Graph Stream using Discriminative Subgraph*, The 14th Annual Research and Creative Inquiry Day, 2019.
- Research Assistant Funding**, awarded by Tennessee Tech University, College of Engineering for achieving Carnegie classification.
- Researcher (Cybersecurity)**, *NSF Grant Number 1560434*, under the PI/co-PI Dr. Syed Rafay Hasan and Dr. Mohamed Mahmoud.

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## OTHER EXPERIENCES

- Graduate Research Mentor**, NSF Research Experience for Undergraduates, 2019.
- Paper Reviewer**, Springer Journal on Social Network Analysis and Mining (SNAM), 2019.
- Graduate Research Mentor**, NSF Funded Research Experience for Undergraduates, 2018.
- Paper Reviewer**, SIAM International Conference on Data Mining (SDM), 2017.