RAGAV SRIDHARAN

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Work Experience & Projects

Research Assistant **Singapore University of Technology and Design (SUTD)** **Feb 2017 to Date**

- **Detection of Threats to IoT Devices using Scalable VPN-forwarded Honeypots:** Developed adaptive clustering technique to detect potential 0-day vulnerabilities by analyzing URLs from HTTP requests on a scalable VPN-forwarded honeypot. (Submitted to CODASPY 2019)
- **Privacy-Preserving Anomaly Detection and Attack Classification on Wireless Traffic:** Developed and implemented a framework (WADAC) to passively detect and identify attacks on IoT devices by analyzing wireless link-layer traffic. This work is accepted as a conference paper in ACM conference on Security and Privacy in Wireless and Mobile Networks (WISEC) 2018. (https://dl.acm.org/citation.cfm?id=3212495)
- **Link-Layer Device Type Classification on Encrypted Wireless Traffic using COTS Radios:** Designed and implemented a framework, PrEDeC, which enables an attacker to detect device types in a targeted environment, thereby posing a threat to user's privacy. This work is published as a conference paper in European Symposium on Research in Computer Security (ESORICS) 2017. (https://link.springer.com/chapter/10.1007/978-3-319-66399-9_14)
- **Detecting Attacks on Water Distribution Systems by Statistical Analysis:** Developed and compared different statistical and classification techniques to detect attacks on a cyber-physical system.

Data Specialist **IBM India (Advanced Analytics Division)** **Sept 2015 to Jan 2017**

- **Predicting Factors Responsible for Machine Failure**: Developed a model to predict the factors responsible for the failure of Injection molding machine. This involved collecting and combining data from multiple sensors and machine logs. To demonstrate the capabilities and functionality of the model to our client, I developed a web application using the tool Shiny in R.
- **Forecasting Demand for Resource Control and Management:** Forecasted demand and roll-offs of employees for Resource Control Management at IBM.
- **Optimizing Production Costs of a Construction Company:** Maximized profits for a construction company by minimizing the cost of raw materials. This involved predicting the country where the raw materials are available at the cheapest price on a future date.

NU-IBM Data Science Program **NIIT University** **Jan 2015 to July 2015**

- **Predicting Results of Delhi State Elections:** Estimated the result of Delhi election by running sentiment analysis on twitter data stream.
- **Predicting Sales During a Stormy Weather:** Developed an analytical solution to predict sales of certain weather affected goods during a stormy weather season for a chain of departmental stores.
- **Predicting Missing Words in a Sentence:** Created a Mental Lexicon of words using n-gram and skip-grams to predict the missing words.

EDUCATION

BTech *(Computer Science Engineering)* **NIIT University, Neemrana** **Aug 2011 to Aug 2015**

Highlighted Coursework: Business Analytics, Predictive Modeling, Big Data Concepts and Inferential Statistics, Algorithms

EXTRACURRICULAR ACTIVITIES AND ACHIEVEMENTS

- Selected as the General Secretary of Students Cooperative at NIIT University.
- Core committee member at Ingenuity 2014, NIIT University's techno-cultural fest.
- Participated in a 6-week German Exchange Program. (3 weeks in Germany and 3 weeks in India)
- Won gold medal in Badminton inter house tournament at NIIT University.