

# ANANDHARAJU DURAI RAJU (ANAND)

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## EDUCATION

**Ph.D.**, School of Computing Science, Simon Fraser University, Burnaby

**Jan 2019 – Till Date**

## KEY PUBLICATIONS

- Low Carbon Footprint Training for 1D-CNNs with Temporal Max-Pooling CIKM 2024
- LockBoost: Detecting Malware Binaries by Locking False Alarms [PDF] JCNN 2022
- A survey on cross-architectural IoT malware threat hunting [PDF] IEEE Access 2021

## RESEARCH EXPERIENCE

**Research Assistant, Simon Fraser University** | Canada | Data Mining (Prof. Ke Wang) **Jan 2019 – Till Date**

- Successfully adopted “Sustainable AI” to the malware detection problem in Cybersecurity by addressing the time and space of training 1D CNN over extremely large sequence inputs and reduced carbon emission by 75%.
- Surpassed state-of-the-art performance by 2-9% over 4 different malware datasets using novel boosting method.
- Enhanced malware detection using hybrid techniques such as CNN-Transformers.

## INTERNSHIP EXPERIENCE

**Research Intern, Huawei Canada** | Canada | Data Privacy & Protection Technology Lab **Jan 2021 – Dec 2021**

- Successfully published the first survey paper on cross-architectural IoT malware threat hunting. [PDF]
- Delivered a compact and top-performing neural network with 97% accuracy based on handcrafted LIEF features.
- Deployed a deep learning-based malware detection solution as a Docker release.
- Delivered opcode-based advanced assembly learning method for hunting cross-architectural IoT ELF malware.

## PROFESSIONAL EXPERIENCE

**Technology Lead, Infosys Limited** | India | Artificial Intelligence & Automation Services **Sep 2011 – Dec 2018**

- Feature Team Lead (Onsite + Offshore) for a team of 14 resources for data provisioning and order visibility project.
- Driven the project development for UI, API and Spark modules to process real-time event data.
- Planned Agile sprints including effort estimation, resource allocation and execution.
- Analyzed, designed and implemented RPA (Robotic Process Automation) solutions.
- Provided robust and reliable 24x7 on-call production support and co-ordinated incident triage meetings.
- Won client’s “**AWARD OF EXCELLENCE**” in 2015 and 2016 for tackling high priority incidents and change requests.
- Initiated automations with business value such as developing SSH and JSch-based tool to monitor the status of InfoVista components deployed in hundreds of servers, reducing 47 person-hours/month of manual work.

## AWARDS AND ACCOMPLISHMENTS

- Garnered “**GOLD MEDAL**” (**Top 1%**) in my undergraduate studies from Anna University at state level in 2011.
- Played the role of undergraduate “**STUDENT CHAIRMAN**” of Computer Science department in during 2010 - 2011.
- Had undergone 3-year “**YOUNG STUDENT SCIENTIST**” initiative by President of India, during my schooling.
- Certified in “**IBM RATIONAL APPLICATION DEVELOPER**” for Websphere 6.0 during 2011.
- Certified in the “**AUTOMATION ANYWHERE ADVANCED RPA PROFESSIONAL**” robotic process automation tool.
- Completed training in IBM Watson V3 and Azure machine learning during 2017.

## SKILLS

**Languages / Databases:** Python, MPI C++, Apache Spark, Java, JSP, HTML, Bash, Postgres, HBase, Oracle, DB2

**Libraries:** PyTorch, Tensorflow, Keras, HuggingFace, REST

**AI / ML Platforms:** Google Colab, AWS, Microsoft Azure, IBM Watson, Infosys NIA

**IDE / Tools:** PyCharm, Visual Studio Code, Jupyter, Eclipse, IntelliJ, DBVisualizer, Toad, Postman, Putty, MobaXterm

**RPA Platforms:** Automation Anywhere, BluePrism, UiPath, Edgeverve AssistEdge