

Pithayuth (Will) Charnsethikul

pithayuth.me | linkedin.com/pithayuth | charnset@usc.edu

RESEARCH INTERESTS

My research focuses on the intersection of computer security, privacy and human-computer interaction. Specifically, I am interested in data-driven cybersecurity. I also have broad interests in AI, particularly in NLP.

EDUCATION

University of Southern California, Ph.D., Computer Science <i>Advisors: Dr. Jelena Mirkovic</i>	Los Angeles, California 2021-present
University of Southern California, M.S., Computer Science <i>Specialization: Computer Networks</i>	Los Angeles, California 2019-2021
Kasetsart University, B.Eng., Computer Engineering	Bangkok, Thailand 2014-2018

RESEARCH EXPERIENCES

Graduate Research Assistant <i>USC Information Sciences Institute (ISI), STEEL: Security Research Lab</i>	August 2021–Present <i>Marina Del Rey, California</i>
<ul style="list-style-type: none">• Phishing: build a dialogue system that not only responds to the phishers but also elicits their information.	
Student Worker, Research <i>USC Information Sciences Institute (ISI), STEEL: Security Research Lab</i>	August 2019–May 2021 <i>Marina Del Rey, California</i>
<ul style="list-style-type: none">• Venmo: build a neural classifier that categorizes Venmo public transactions into multiple sensitive classes.• Cloud Misbehavior: identify which /24 network prefixes are "cloud", then quantify the amount of bad traffic originated from these networks.• DDoS Detection: implement various anomaly detection approaches and evaluate them with the captured traffic.	
CSCI651: Computer Networking Research Project <i>Mentor: Dr. John Heidemann</i>	August 2020–December 2020 <i>Remote</i>
<ul style="list-style-type: none">• DNS latency: Previous work suggested that DNS latency could be estimated from TCP handshake time. However, TCP was not widely used in DNS and as a result the proposed method ran into poor coverage. To make this method practical, we modify authoritative DNS server code in the way that it probabilistically asks their clients to retry some of their queries over TCP by setting the TC bit.	

PUBLICATIONS

- Quantifying Cloud Misbehavior; Rajat Tandon, Jelena Mirkovic, **Pithayuth Charnsethikul**; 2020 IEEE International Conference on Cloud Networking (CloudNet 2020)

TECHNICAL SKILLS

Languages: Python, C, C++, Bash, HTML, CSS, JavaScript, Typescript, SQL, JAVA, Perl, L^AT_EX
Frameworks: scikit-learn, PyTorch, Torch, TensorFlow, Keras, Huggingface, Angular, Node.js
Packages and Tools: NumPy, Pandas, SciPy, Git, Docker, MySQL
Platforms: Linux, macOS, Windows, Arduino, Raspberry, GCP
Networking: tcpdump, Wireshark, Nmap, Knot DNS

GRADUATE COURSEWORK

Analysis of Algorithms, Applied Cryptography, Foundations of Artificial Intelligence, Machine Learning, Advanced Natural Language Processing, Advanced Operating Systems, Computer Networking, Security Systems

CERTIFICATIONS

- Deep Learning Specialization by DeepLearning.AI, Coursera

REFERENCES

- Dr. Jelena Mirkovic, Research Assistant Professor, USC ISI, mirkovic@isi.edu