

Pithayuth (Will) Charnsethikul

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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 Los Angeles, California
Advisors: Dr. Jelena Mirkovic 2021-present

University of Southern California, M.S., Computer Science Los Angeles, California
Specialization: Computer Networks 2019-2021

Kasetsart University, B.Eng., Computer Engineering Bangkok, Thailand
2014-2018

RESEARCH EXPERIENCES

Graduate Research Assistant August 2021–Present
USC Information Sciences Institute (ISI), STEEL: Security Research Lab Marina Del Rey, California

- **Phishing:** build a dialogue system that not only responses to the phishers but also elicits their information.

Student Worker, Research August 2019–May 2021
USC Information Sciences Institute (ISI), STEEL: Security Research Lab Marina Del Rey, California

- **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 August 2020–December 2020
Mentor: Dr. John Heidemann Remote

- **DNS latency:** modify DNS servers to solicit TCP from selected clients, allowing us to determine RTTs.

PUBLICATIONS

- PETS2022: I know what you did on Venmo: Discovering privacy leaks in mobile social payments; Rajat Tandon, **Pithayuth Charnsethikul**, Ishank Arora, Dhiraj Murthy, Jelena Mirkovic
- PAM2022: Old but Gold: Prospecting TCP to Engineer and Live Monitor DNS Anycast; Giovane C. M. Moura, John Heidemann, Wes Hardaker, **Pithayuth Charnsethikul**, Jeroen Bulten, João M. Ceron and Cristian Hesselman
- CloudNet2020: Quantifying Cloud Misbehavior; Rajat Tandon, Jelena Mirkovic, **Pithayuth Charnsethikul**

TECHNICAL SKILLS

Languages: Python, C, C++, Bash, HTML, CSS, JavaScript, Typescript, SQL, JAVA, Perl, \LaTeX
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, Robustness and Generalization in 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