





Succinct Data Structures+PDA also  
useful for gathering statistics!

**T****r**

Action:   0 of 100 selected

<input type="checkbox"/>	IP Address	Label	Type	Available	Subnet	Device	Mac address	Last edited	Notes
<input type="checkbox"/>	3.3.3.1	(None)	(None)		3.3.3.0/24	app001-04	(None)	Oct. 12, 2012, 6:38 a.m.	(None)
<input type="checkbox"/>	3.3.3.2	(None)	(None)		3.3.3.0/24	app001-04	(None)	Oct. 12, 2012, 6:38 a.m.	(None)
<input type="checkbox"/>	3.3.3.3	(None)	(None)		3.3.3.0/24	sh-fujitsu-02	(None)	Oct. 12, 2012, 7 a.m.	(None)
<input type="checkbox"/>	9.0.0.1	(None)	(None)		9.0.0.1/24	sh-demo-42	(None)	Oct. 4, 2012, 2:46 p.m.	(None)
<input type="checkbox"/>	9.0.1.1	(None)	(None)		9.0.1.0/24(ABC Inc)	app001-04	(None)	Oct. 12, 2012, 6:38 a.m.	(None)
<input type="checkbox"/>	9.0.3.33	(None)	(None)		9.0.3.32/28	sh-demo-06	(None)	Oct. 4, 2012, 1:15 p.m.	(None)
<input type="checkbox"/>	9.0.3.49	(None)	(None)		9.0.3.40/28	sh-demo-06	(None)	Oct. 4, 2012, 1:16 p.m.	(None)
<input type="checkbox"/>	9.0.3.50	(None)	(None)		9.0.3.48/28	sh-demo-06	(None)	Oct. 4, 2012, 2:37 p.m.	(None)
<input type="checkbox"/>	9.0.3.51	(None)	(None)		9.0.3.48/28	app001-04	(None)	Oct. 12, 2012, 6:56 a.m.	(None)
<input type="checkbox"/>	9.0.3.52	(None)	(None)		9.0.3.48/28	app001-04	(None)	Oct. 12, 2012, 6:57 a.m.	(None)
<input type="checkbox"/>	9.9.0.1	(None)	(None)		9.9.0.0/16	sh-hw-11	(None)	Oct. 12, 2012, 6:25 a.m.	(None)
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<input type="checkbox"/>	9.9.0.3	(None)	(None)		9.9.0.0/16	sh-fujitsu-02	(None)	Oct. 12, 2012, 7:01 a.m.	(None)

Scientific Data Structures + PDA also

useful for gathering statistics!

Our work aggregates location time-series



2. Quantify how much privacy data aggregates **leak**? [2]

# 1. Mobility analytics using aggregate location [1]

3. Membership inference attacks using aggregates [3]

LocationData.InACMSIGSPATIAL2016

[1] A. Pyyrgelis, G. Ross, E. De Cristofaro. Privacy-Friendly Mobility Analytics Aggrat

[2] A. Pynge, C. Tronzo, E. De Cristofaro. What Does The Crowd Say About You? Evaluating

Aggregation-based Location Privacy. In PETS 2017

[3] A. Pynge, C. Troncoso, E. De Cristofaro, K. Knorr, Who's There? Membership Inference



on Aggregation Location Data In NDSs 2018. Distinguished Paper Award.