Narek Galstyan

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Education

UC Berkeley, Berkeley, CA **NetSys Lab**, PhD Aug 2020 –
Coursework: Advanced Networks, Applications of Parallel Supercomputers, Deep Reinforcement Learning
Projects:
Oblivious prefetching: Built application-transparent far memory prefetching, leveraging application access pattern recording. The system was built into Linux memory subsystem and supported unmodified Linux binaries.
Content revocation: Prototyped a global revocation system that allows users to control the dissemination of their personal content. Carried out a performance analysis of the approach.

Princeton University, Princeton, NJ **B.S.E. Computer Science** Sep 2016 – Jun 2020
Summa Cum Lade. Selected Coursework:
Math: Graph Theory, Applied Algebra, Adv. Vector Calculus, Adv. Linear Algebra, Randomized Algorithms
CS Theory: Data Structures and Algorithms, Machine Learning, Theory of Computation
CS Applications: Functional Programming, Computer Vision, Computer Graphics, Information Security
CS Systems: Adv. Computer Networks, Adv. Programming Techniques, Operating Systems, Distributed Systems

ETH Zurich, Zurich, Switzerland **Computer Science** exchange student Sep 2019 – Jan 2020
UWC Adriatic, Duino, Italy **International Baccalaureate (IB) Diploma** Sep 2013 – May 2015

Experience

Software Engineer, Intern **Tanium Inc,** Emeryville Jun 2020 – Aug 2020
- Designed a memory safe C++ wrapper around CentOS librpm and integrated it into Tanium Endpoint Security
- Worked closely with organizations deploying Tanium on Linux to implement relevant endpoint data collection

Undergraduate Researcher **Princeton Systems Lab,** Princeton Jul 2019 – Aug 2019
- Explored the design of Firecracker VMM and identified ways to optimize Linux images for certain workloads
- Examined Linux kernel initial boot and identified optimizations resulting in x1.5 boot time improvement

Software Engineer, Part-time **TimescaleDB Inc**, New York Sep 2018 – Jun 2019
- Led the efforts to test, adapt and deploy TimescaleDB on RaspberryPi and developed CI/CD for it
- Implemented enterprise database features and helped clients deploy TimescaleDB on edge

Software Engineer, Intern **TimescaleDB Inc**, New York Jun 2018 – Aug 2018
- Collaborated with engineers and communicated with users to identify needed features and develop them
- Designed and implemented data archiving functionality in C on underlying PostgreSQL API of TimescaleDB
- Wrote an SQL query deparser in C that helps to serialize existing structures in PostgreSQL for transfer

Full-Stack Developer **Liechtenstein Institute**, Princeton University May 2017 – Jul 2017
- Developed a Solr based system to interactively plot the usage of keywords in historical documents
- Built a Node.js application with Vue and Chart.js dashboard deployed on an EC2 instance

Analytics and Big Data Engineer **Forkize**, Yerevan, Armenia Sep 2015 - Aug 2016
- Designed and implemented an analytics engine using Javascript backed up by ClickhouseDB
- Created, benchmark tested and maintained Hadoop and Apache Spark cluster on AWS EC2

Teaching

Graduate Teaching Assistant **Internet Architecture** (CS 168), UC Berkeley Sep 2022 – Dec 2022
- Prepared and led weakly discussion on the topics covered during the week

Teaching Assistant **Information Security** (COS 432), Princeton University Sep 2018 – May 2019
- Graded programming and security design assignments, developed assignment infrastructure

CS Lab Teaching Assistant **Introductory computer science courses** Sep 2017 – Sep 2020
Promoted to Head TA (COS 126, COS 226, COS 217 and COS 109)

Workshop Leader, Cryptography **Tumo Center for Creative Technologies**, Yerevan Jul 2018 – Aug 2018
- Taught cryptography basics to a group of 20 high school students in a 2-week 40-hour intensive course

Workshop Leader, Machine Learning **Tumo Center for Creative Technologies**, Stepanakert Jul 2017 – Aug 2017

Languages and Technologies

Software/hardware: C, Linux, Rust, x86&arm Assembly, Python, JavaScript, OCaml, Arduino
Big Data Tools/DBs: PostgreSQL, TimescaleDB, Apache (Spark, Hadoop, Kafka), Yandex Clickhouse