M. TALHA PARACHA

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EDUCATION

Northeastern University, Boston — 2018 - Present
Ph.D. in Computer Science, advised by Prof. David Choffnes. — CGPA: 3.91 / 4

National University of Sciences and Technology, Islamabad — 2014 - 2018
Bachelor of Software Engineering. — CGPA: 3.81 / 4

WORK EXPERIENCE

Research Assistant, Northeastern University — Fall 2018 - Present
Internet Security, Privacy — Prof. David Choffnes

Exploring the caveats of TLS usage in IoT devices, and HTTPS deployment issues on the web.

Research Intern, EPFL - Switzerland — Summer 2018
Medical Data Security, Blockchains — Prof. Jean-Pierre Hubaux

Implemented a blockchain-based access control system for medical data featuring a decentralized design with full auditability (more details @ talhaparacha.com/medchain.pdf).

Research Intern, Rutgers University — Summer 2017
Computer Networks, Measurements — Prof. Waheed Bajwa

Proposed modification to a distributed average consensus algorithm for packet-switched networks to reduce its bandwidth overhead by $\approx 25\%$ (more details @ talhaparacha.com/communication.pdf).

Research Intern, TUKL NUST R&D Center — Spring 2017, Spring 2018
Machine Learning, Computer Vision — Prof. Faisal Shafait

Proposed new techniques for privacy-preserving incremental learning, including the usage of adversarial instances and model layer fixation. Resulting group project won the best bachelor's thesis award.
(more details @ talhaparacha.com/fyp.pdf)

Open-source Developer, Google Summer of Code — Summer 2016
Web Development, Internet Security

Built an encryption module for Drupal, the popular open-source web framework, to secure the site's data-at-rest with users' login credentials. Google sponsored all the work via GSoC'16 program.
(more details @ drupal.org/project/pubkey_encrypt)

OTHER ACTIVITIES

Mentor, Google Summer of Code & Google Code-In
Mentored students to complete open-source projects for Drupal via GSoC'17 and GCI'16 programs.

Organizer, MLH Local Hack Day
Conducted a bug-fixing workshop in college about how open-source communities work.

Winner, Women Transport Innovation Hackathon
Developed an SOS Android app with support for cellular-network based monitoring.

Winner, SEECS Social Hackathon
Developed an Android app for entry test preparation based on a crowd-sourcing model. Competed against 50+ senior students from the department as a freshman-only team.

Travel Grants Recepient, NDSS Symposium 2017 at San Diego, and DrupalCon 2017 at Baltimore

TECHNOLOGIES

C, C++, Python, Java, Go, PHP, MySQL, NoSQL, HTML + CSS, Javascript.

Linux, Git, Travis CI, OpenCV, LaTeX, Wordpress, Drupal, Adobe Photoshop.

GRADUATE COURSEWORK

CS6740	Network Security	A
CS5770	Software Vulnerabilities and Security	A
CS7600	Intensive Computer Systems	A
CS7250	Information Visualization	A-
CS6140	Machine Learning	(on-going)