

# M. TALHA PARACHA

paracha.m@husky.neu.edu  $\diamond$  [talhaparacha.com](http://talhaparacha.com)

## EDUCATION

---

**Northeastern University, Boston** 2018 - Present  
Ph.D. in Computer Science, advised by Prof. David Choffnes. CGPA: 3.95 / 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](http://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](http://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](http://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](http://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 Receptient**, 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, L<sup>A</sup>T<sub>E</sub>X, 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)