

# Talha Paracha

14besemparacha@seecs.edu.pk • +92 331 5363 735  
[talhaparacha.com](http://talhaparacha.com) • [github.com/talhaparacha](https://github.com/talhaparacha) • [drupal.org/u/talhaparacha](https://drupal.org/u/talhaparacha)

## EDUCATION

### NUST, ISLAMABAD

#### BE, SOFTWARE ENGINEERING

Cum. GPA: 3.72 / 4  
2014 - 2018

## COURSEWORK

### ONLINE

Machine Learning  
Intro. to Psychology  
Intro. to Philosophy  
Digital Image Processing  
Intro. to Theoretical Comp. Science

### UNDERGRAD

Operating Systems\*  
Web Engineering\*  
Database Systems  
Computer Networks  
Computer Architecture  
Discrete Mathematics  
Software Engineering  
Intro. to Programming  
Object Oriented Programming  
Data Structures & Algorithms  
Design & Analysis of Algorithms  
Software Design & Architecture\*  
(\*ongoing)

## SKILLS

### LANGUAGES

C & C++  
PHP & MySQL  
HTML & CSS

### TOOLS

Git  
Photoshop  
Wordpress & Drupal

## EXPERIENCE

### RESEARCH ASSISTANT | TUKL-NUST R&D CENTER

November 2016 - ongoing

- Working on an autonomous vehicle number-plate detection and recognition project.
- Developing an engine for generating synthetic data to be used for training a convolutional neural network.

(see more work details @ [tukl.seecs.nust.edu.pk](https://tukl.seecs.nust.edu.pk))

### GOOGLE CODE-IN | DRUPAL MENTOR

November 2016 - ongoing

- Mentoring pre-university students to work in open-source.

### GOOGLE SUMMER OF CODE | DRUPAL DEVELOPER

Summer 2016

- Built an encryption module for Drupal, the popular open-source framework for web development.
- The module secures a website's Data at Rest by encrypting it with users' login credentials.
- Google sponsored all the work via the GSoC'16 program.

(see more project details @ [drupal.org/project/pubkey\\_encrypt](https://drupal.org/project/pubkey_encrypt))

## ACHIEVEMENTS

### WINNER | WOMEN TRANSPORT INNOVATION HACKATHON

September 2015 | Sponsored by UN-Women

- Developed an SOS Android app + website for women.
- Features included offline GPS based monitoring & offline cab's numberplate photo sharing/retrieval.

### WINNER | SEECS SOCIAL HACKATHON

March 2015 | Sponsored by Telenor

- Developed an Android app for entry test preparation based on a crowdsourcing model.

### RECIPIENT | RECTOR'S APPRECIATION AWARD TO HIGH ACHIEVERS

For Year 2015 | Sponsored by NUST

## PROJECTS

### TEXT COMPRESSION | LEMPEL-ZIV ALGORITHM & SUFFIX TREES

Jan 2016 | Written in C++

- Built Suffix Trees using Ukkonen's online algorithm and implemented the original Lempel-Ziv algorithm for text compression.
- Compression of 1 million alphanumeric characters took 13 seconds to complete and resulted in a reduction of around 0.2 million characters.

### WEBTIMIZE.ME | COMPREHENSIVE WEBSITE SEO AUDIT TOOL

June 2013 | Written in PHP

- Developed an online SEO report generator for analyzing 10+ basic but important SEO factors including broken 404 links, missing alternate texts on images, user-friendly URLs, duplicate title tags, GZIP compression and a few others.