

# Raghuram Vadapalli

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## Education

2014–present **B.Tech and M.S by Research in CSE, IIIT Hyderabad, CGPA 8.7/10.**

2006–2013 **Senior Secondary, CBSE, Sainik School, Vizianagaram, 93%.**

## Experience

2017 **Google Summer of Code, *phpMyAdmin*.**

Added enhancements to phpMyAdmin, a web interface for MySQL - <http://bit.ly/2yzXwLD>.

- Added 2-factor authentication support for phpMyAdmin.
- UI enhancement: Replaced existing multi-table query interfaces with a single interface.
- Improved phpMyAdmin setup to allow for accessing file-system.
- Wrote unit tests for all the implemented functionality using PHPUnit and Selenium.

2017 **Software Development Engineer Intern, *OpenDaylight*.**

OpenDaylight (ODL) is an open-source organization which maintains ODL SDN controller. Along with the main controller project, ODL has more than 60 projects. All these projects produce huge amount of tests data. Built an automated dashboard creation and visualization tool using Elastic Search and Kibana to visualize this data. More details can be found at <http://bit.ly/2yANYRa>.

2015 **Android Application Developer, *Froogal*.**

Froogal is a start-up based in Hyderabad, India aimed at digitizing customer loyalty programmes in use in various restaurants around Hyderabad city. I was the lead developer (for a team of 3) responsible for building the first version of the app. Worked with Android Studio, Google Maps v2, OAuth 2.0. Wrote REST APIs in Codelgniter for serving data to app.

2015 **Game Developer, *Playzio*.**

As part of the course Structured Systems Analysis and Design, we (a team of 4) worked with a game development company called Playzio. We designed, developed and deployed an android app for a popular dissection puzzle called Tangram using Cocos Studio and Cocos2d-JS.

## Projects

### Development

**Wikipedia Search Engine** Built a scalable search engine on a static Wikipedia dump of 60GB using distributed indexing, searching and ranking. Various optimization algorithms and data structures were used to minimize latency in serving results.

**Style Transfer In Text (*In progress*)** Our team of 3 is selected for a collaborative project with *Adobe Research India*. The project includes exploring and building neural network models for transferring style in Natural Language text.

**Movie Recommender & Question Answering System** Built a factoid question answering system using facebook bAbI Movie Dialog Dataset which can recommend movies based on your history and answer simple factoid questions about movies. We made use of data clustering techniques and Recurrent Neural Networks.

**Linux Mini Shell** A linux shell implemented in C language using system programming as a part of Operating Systems course which can handle basic OS functionality such as backgrounding, piping, concurrency etc. Used concepts such as forks, signals, pipes etc.

**Semi-supervised POS Tagging** Implemented a Part-of-Speech tagger in a semi-supervised setting using distributed representations of words. We made use of python-nltk and a machine learning model called HMM.

**P2P File-sharing app** Built an application in python using socket programming that enables data/file transfer (over UDP and TCP), real time chatting, indexed searching and automatic synchronization of files in a shared folder.

## Publications

**SSAS: Semantic Similarity for Abstractive Summarization**, *First Author, IJCNLP 2017*  
Abstractive summarization systems generate own sentences while summarizing documents. We (a team of 4) formulated a metric for evaluating performance of such systems.

**Abstractive Multi-document Summarization by Partial Tree Extraction, Recombination and Linearization**, *Co-Author, IJCNLP 2017*

We (a team of 3) worked on designing a new algorithm for abstractive summarization. I was responsible for carrying out a number of experiments reported in the paper.

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## Positions of Responsibility

**Teaching Assistant** **IT Workshop 1** Monsoon 2015 · Monsoon 2016  
Taught Shell, Web development, Introduction to network and application security.

**Natural Language Processing** Monsoon 2017  
Responsibilities include teaching Natural Language Processing to Junior and Senior level undergraduates, and postgraduates and mentoring course projects.

**Research Assistant** **Information Retrieval and Extraction Lab** Summer 2016  
Implementing existing techniques, experimenting and formulating new techniques for abstractive multi-document summarization.

**CodeCraft Organizer** **Felicity** Monsoon 2015  
As part of organizing coding competition for university techno-cultural fest, deployed *Domjudge*, a distributed online solution judging platform and lead the team as overall coordinator.

**Program Coordinator** **STEP Program · IIIT-H** Summer 2016  
Coordinated the program and taught Computational Thinking and Problem Solving (CTPS) to high school students as part of two-month *Summer Training and Education Program*.

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## Achievements

**IJCNLP 2017** Published two research papers in *International Joint Conference on Natural Language Processing 2017, Taipei, Taiwan*.

**ACM-ICPC 2016** Qualified *ACM International Collegiate Programming Contest* (2016) India regional, Amritapuri securing a rank of 112 among 3000+ teams that participated.

**Dean's List** Selected in *Dean's List* of meritorious students for academic excellence for years 2014-15, 2015-16 and 2016-17.

**OSDG Hackathon** Won second prize in university Hackathon for building firefox and chrome add-ons for university course management system Moodle in Monsoon 2014.

**JEE Main** Secured 3357 rank in *Joint Entrance Examination Main, 2014* in which 1.4 million students took part. Percentile score: 99.86.

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## Technical Skills

Languages C++ · Python · Javascript · PHP · LaTeX \_\_\_\_\_ *Advanced*  
C · Assembly · Java · MySQL \_\_\_\_\_ *Intermediate*

Technologies Elastic Search · Kibana · Git · Tensorflow · Keras \_\_\_\_\_ *Working Knowledge*  
MPI · OpenMP · System & Socket Programming · Docker  
phpUnit · Selenium · Gerrit · OpenGL · WebGL · Android \_\_\_\_\_ *Past Experience*

Relevant Coursework Complexity & Advanced Algorithms · Data Structures · Operating Systems · Computer Networks · Natural Language Processing · SM in AI · Information Retrieval & Extraction · Parallel & Scientific Computing · Database Systems · Structured Systems Analysis & Design