

Rishi Raj

Resumé

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Develop Applications helpful to Million's of Users

Education

- 2011-present **Bachelor of Technology in Computer Science and Engineering**, *International Institute of Information Technology*, Hyderabad, CGPA - **8.31**.
- 2010 **Senior Secondary Education**, *Kendriya Vidyalaya No.1*, Jammu, **89.6%**.
- 2008 **Senior School Certificate Examination**, *Kendriya Vidyalaya No.1*, Jammu, **90.8%**.

Interests

- **Cloud Computing**, **Information Retrieval** and **Application Development**
- **Algorithms**, **Programming**, **Problem Solving**

Achievements

- Academics** Appeared in **Deans Merit List** for Academic Excellence in for the year 2012 and 2013.
- IIT-JEE** **AIR 8108** in IIT-JEE 2011.
- AIEEE** **AIR 2102** and **State Rank 2 (Jammu and Kashmir)** in AIEEE 2011.
- IAPT, IACT** **State Top 1%** for the year 2010.
- ACM ICPC** Participated in ACM Amrita Regionals 2013.
- SPOJ** Achieved Minimum World Rank under **200**. *Spoj Profile*
- CodeJam** Stood **3rd** in Google Developer Group Hyderabad Code Jam.

Professional Experience

- GCDC **Developer**, THE TRAVELERBOOK.
Developed this app in **python webapp2** for **Google Cloud Challenge (GCDC)** using various Google Technologies such as **App Engine**, **Blogger**, **Maps**, **Calendar**.
- May-July'13 **Core Developer / Software Developer Intern**, APNISTREET.
ApniStreet is a Social network developed using **Pyramid Framework** that connects people of neighborhoods with each other and discuss related issues.
 - Developed **Chat and Messaging Systems** using long-polling.
 - Developed **News-feed** using **redis-db** for fast data-access and minimal calls to **mysql-db**.
- Sep-Nov'13 **Core Developer / Software Developer Intern**, JUNTA TALENT / BMPEX.
JuntaTalent is a **video sharing portal** for various **college fests** happening around the country. It was developed using **Apache Tomcat JSP** and **Amazon AWS APIs**.
- Oct-Dec'13 **Software Developer Intern**, ZOIK IT, winner of **Microsoft Imagine Cup 2013**.
The aim of the intern is to port the existing **ZoikIt** app from **Windows Mobile** to **Android Platform** with better **User Interface and performance**.
- June-July'13 **Research Assistant**, VIRTUAL LABS.
Ported on-line experiments to the **Android platform** for rich-user experience.
- Jan-Apr'14 **Teaching Assistant**, DIGITAL SIGNAL ANALYSIS AND APPLICATIONS.

Technical Competencies

- Programming C, C++, Python, Java, Racket / Scheme
- Scripting Bash, Python
- Web HTML5, CSS3, JavaScript(jQuery, Knockout), XML, AJAX

Frameworks	Pyramid, Apache Tomcat, Webapp2, Flask, Web2Py, PHP
Databases	MySQL, SQLite, Redis(Key-Value), MongoDB(Document-Store), Solr(Search)
VersionControl	SVN, GIT
Systems and APIs	SQLAlchemy, libvirt, ceph, VMware, pox, mininet, redis-py, Amazon AWS console and API's, Android SDK, Google App Engine API's, Hadoop, OpenGL, POSIX, Nokia SDK, Matplotlib, urllib / urllib2, Mechanize, Curses, Socket Programming, oauth, flex, bison
Environments	Vim, Eclipse, CodeBlocks, Bpython, SublimeText
Miscellaneous	Matlab, LaTeX, GIMP, ARM Assembly Language

Major Projects

Software Defined Networking - Optimizing Flow Table Transfer during VM Migration

Guide **Prof. Vasudeva Varma**

Description Developed a system to optimize the Flow Table transfer during migration of VM's within or across server racks using machine learning and classification to bring intelligence to the **OpenFlow** interface. The project is also a part of Unisys Cloud 20-20 Challenge.

Cloud Orchestration Layer

Description Developed REST APIs for the same using **Flask, MongoDB, ceph and libvirt APIs**, that can coordinate the provisioning of compute resources by negotiating with a set of Hypervisors running across physical servers in a datacenter.

Wikipedia Search Engine / Information Retrieval System

Description Built a search engine using 43GB of Wikipedia data which includes efficient indexing and ranking.

Ride Safe

Guide **Prof. Kamalakar Karlapalem**

Description The project aims to improve Road Safety by warning drivers before they violate traffic rules, via an alert system deployed via **Android Operating System Platform**.

Face Recognition System

Guide **Prof. Kishore S. Prahallad**

Description Designed and Implemented the same using 7 different color models for skin segmentation and face template matching in **MATLAB**.

Other Projects

- Developed a **Database-driven dynamic Web-Application** for Restaurant Systems (like Domino's) where the customer can order and make payment on-line using **PHP, MySQL, JavaScript**.
- Developed a **CLI based File Sharing System** similar to **LinuxDC++** using **Linux Socket Programming** using **UDP and TCP protocol**.
- Developed an **Interactive Shell** which handles basic commands with piping and redirection.
- Developed a custom **OpenGL PipeLine Library**.
- Designed and Developed **Robot-Run**, a **3D-Game** in C++ using **OpenGL** with lighting and shadow effects, textures and several camera views. The game has been developed on the similar grounds of **Temple Run**.
- Developed an **Android Application** at **Hyderabad Startup Weekend** in 24 hours that helps the users prioritize calls during their busy time with option to send prerecorded message or voice in case of miss calls.
- Developed **NokiaS40 Game "Logo's"** in 24 hours which asks the player to guess the given logo.
- Developed an **Image Sharing Website** using **Web2Py**.

Relevant Courses

- Cloud Computing, Information Retrieval and Extraction, Distributed Systems, Computer Networks, Operating Systems, Computer System Organization, Databases
- Algorithms, Computer Programming, Data Structures, Formal Methods, Compilers, Principles of Programming Languages, Artificial Intelligence, Structured System Analysis and Design

I hereby declare that the above information is true to the best of my knowledge.