

# Rahul R Huilgol

<http://rahul003.github.io>

Prefinal Year Undergraduate Student  
Department of Computer Science and Engineering  
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## Education

Institute	<b>Indian Institute of Technology Guwahati</b>	Guwahati, India
Degree	Bachelor of Technology, <b>Computer Science and Engineering</b>	2011 – Present
CPI	<b>8.45</b> (after 4 semesters) on a scale of 10	
SPI	Most Recent – <b>8.62</b>	
Institute	Sri Chaitanya Junior Kalasala [Board: <b>BIE-AP</b> ]	Hyderabad, India
Score	<b>96.1%</b>	2009 – 2011
Institute	Sanghamitra School [Board: <b>CBSE</b> ]	Hyderabad, India
Score	<b>94.4%</b>	– 2009

## Projects

[Link to Projects on my Website](#)

Title	<b>Machine Learning using CCA on Network Traffic Data</b>	<i>Status: Ongoing</i>
Guide	Dr. Vijaya Saradhi, <i>IIT Guwahati</i>	
Nature	Summer Research Project	
Details	By representing network traffic data in different ways and maximizing correlation between these representations (using Canonical Correlation Analysis), we are trying to establish relationships between various features of the data.	
Title	<b>Tweet Categorization</b>	<i>Independent Project</i>
Details	Developed a system to classify tweets into categories using the principles of a binary Bayesian Classifier. This when used for the contest Twitminer (organized by IISc Bangalore) gave an accuracy of over 90% and was ranked 26th in India.	
Title	<b>Handwritten Digit Recognizer</b>	<i>Independent Project</i>
Details	Developed a system to recognize handwritten digits using knn-algorithm.	
Title	<b>Movie reviews using Sentiment Analysis</b>	<i>Independent Project</i>
Details	Currently working on a system, using NLP and ML techniques, to mine the sentiment of tweets on a newly released movie and analyze whether there is a positive or negative buzz on the movie.	
Title	<b>Enhancing the kernel of Pintos</b>	
Guide	Dr. Sajith Gopalan, <i>IIT Guwahati</i>	
Details	Augmenting the basic <a href="#">PintOS</a> kernel (developed at Stanford) by adding various advanced OS constructs like Process Synchronisation primitives, schemes to run programs in user and kernel mode, file system management and virtual memory with demand paging etc.	
Title	<b>SyncBox - A file hosting and file synchronization service</b>	
Guide	Dr. Pradip .K. Das, <i>IIT Guwahati</i>	
Details	Led a group of 19 to develop a feature-rich file hosting service which supports automatic 2 way synchronization of files across various computers (Linux) similar to <a href="#">Dropbox</a> . It involved use of Django framework(Python), SSH and few linux utilities.	
Title	<b>2 Pass Assembler Linker Loader for 8085</b>	<b>Python</b>
Guide	Dr. Santosh Biswas, <i>IIT Guwahati</i>	
Details	Developed a 2 pass 8085 assembler, linker and loader. It supports various new instructions (not in 8085 instruction set), looping capability and macros, which are converted to the 8085 assembly language accepted by <a href="#">GNUSim8085</a> . It also detects various kinds of errors in syntax and semantics.	

Title	<b>A Human v/s Computer Game</b>	<b>Java</b>
Guide	Dr. Saswata Shannigrahi, <i>IIT Guwahati</i>	
Details	Developed a fully functional (difficult to beat) implementation of the ancient board game <a href="#">Kalaha</a> . This gave me insights into basic Artificial Intelligence (Specifically, Minimax and Alpha-Beta pruning).	

More details and more projects can be seen on my [Website](#)

## Technical Skills

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<b>Programming Languages</b>	C, C++, Java, Python, UNIX Shell Scripting
<b>Web Development</b>	HTML, CSS, Javascript, PHP
<b>Operating Systems</b>	Linux, Microsoft Windows
<b>Tools &amp; IDE</b>	Visual Studio, Eclipse, Microsoft Office, LaTeX
<b>Frameworks/Libraries</b>	Twitter Bootstrap, Scikit-learn, Weka

## Research Interests

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Machine Learning Operating Systems	Natural Language Processing	Information Retrieval
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## Major Academic Achievements

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- **1132 (top 0.2 %)** in **IIT-JEE 2011** among *half million* participants across India
- Secured an All India Rank of **2432** (in the top **0.2%**) among 1 million participants in **AIEEE 2011**
- Stood **73** in **KCET 2011** and **310** in **EAMCET 2011**, Engineering Stream
- Secured **3 National Merit Certificates in Science, Maths & English** from the **CBSE** for being in the top 0.1% performers among more than 630,000 students in CBSE 2009 Board Exams

## Courses

*Courses in italics will have finished by April 2014*

**Theoretical:** Discrete Math, Data Structures, Algorithms, Formal languages and automata theory, *Theory of Computation*

**Systems:** Digital Design, Computer Organization and Architecture, *Operating Systems, Compilers*

**Math:** Linear Algebra, Real and Complex Analysis, Multivariable Calculus, *Probability, Optimization*

**Others:** Software Engineering, *Data Communication, Networks,*

**Online:** *Learning from Data (Caltech), Machine Learning (Stanford), Web Intelligence & Big Data(IITD)*

**Labs:** *Peripherals, Databases, Compilers, Networks, System Software, Software Engineering, Systems Programming, Hardware*

## Positions of Responsibility and Extra Curricular Activities

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- **Batch Representative** of CSE 2015 Batch
- **Student Representative** (Third Year) in Department Undergraduate Planning Committee
- **Literary Secretary** of Dihing Hostel, IIT Guwahati for the year 2012 – 2013
- **Head Boy** of Sanghamitra School during the academic year 2008 – 2009
- Core Team Member and Event Organizer of IITG Entrepreneurial Summit 2013
- Enthusiastic participant in hackathons, workshops, lectures and coding contests conducted by Coding Club and Google Developers Group, IIT Guwahati
- Hobbies include reading books, photography

## References

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- Dr. Vijaya Saradhi, Assistant Professor, Dept. of CSE, IIT Guwahati
- Dr. Pradip K Das, Associate Professor, Dept. of CSE, IIT Guwahati