

Achyudh Ram

CONTACT INFORMATION	Personal website: www.achyudh.xyz github.com/achyudhk ; linkedin.com/in/achyudhk	+91-861-042-2481 achyudhk@gmail.com
RESEARCH INTERESTS	Software Analytics, Information Retrieval Machine Learning, Artificial Neural Networks	
EDUCATION	Birla Institute of Technology & Science , Pilani B.E. (Hons.), Computer Science , <i>Expected:</i> August 2018 <ul style="list-style-type: none">GPA: 9.65/10.0 and Major GPA: 9.73/10.0Top 1% of the university's students by GPAThesis: <i>Assessing the reviewability and automating the evaluation of GitHub Pull Requests</i>Adviser: Prof. Alberto Bacchelli, TU Delft M.Sc. (Hons.), Economics , <i>Expected:</i> August 2018 <ul style="list-style-type: none">Major GPA: 10.0/10.0	
TEACHING EXPERIENCE	Teaching Assistant - Neural Networks & Fuzzy Logic BITS F312 with Tirtharaj Dash , Department of Computer Science, Birla Institute of Technology & Science, Pilani	<i>Jan 2017 – May 2017</i>
	Teaching Assistant - Data Structures & Algorithms CS F211 with Dr. A. Baskar , Department of Computer Science, Birla Institute of Technology & Science, Pilani	<i>Jan 2017 – May 2017</i>
WORK EXPERIENCE	Student Researcher, SERG, TU Delft <ul style="list-style-type: none">Writing my senior thesis on assessing the reviewability and automating the evaluation of GitHub Pull RequestsWorking on automating the detection of type mismatches between source code and comments in PythonParticipated in courses on software analytics and software engineering methods Software Developer Intern, Intuit Inc. <ul style="list-style-type: none">Developed a data engine and a dynamic reports engine directly on top of the databaseBuilt an insights engine to provide forecasts and a variety of insights based on the data engine Economic Research & Planning Intern, Indian Bank HQ <ul style="list-style-type: none">Developed environment sensitive time-series forecasting models for setting business targets	<i>Aug 2017 – Dec 2017</i> <i>May 2017 – Jul 2017</i> <i>May 2015 – Jul 2015</i>
RESEARCH PROJECTS	Analysis framework for decoding online developer communities Adviser: Prasad Talasila GitHub: github.com/achyudhk/Mailing-List-Network-Analyzer <ul style="list-style-type: none">Analyzed author interaction through community detection in mailing lists and IRC channelsDeveloped a text mining approach to identify topic experts and label communitiesUtilized visual aids to examine the activity and decode the structure of the developer communities Fitness-aware brokering of hosted containerized environments Adviser: Dr. Santonu Sarkar GitHub: achyudhk/Fitness-Aware-Container-Brokering <ul style="list-style-type: none">Developed an integration agent that benchmarks and containerizes a SaaS catalog offering and a smart fulfillment engine that deploys it into the best-fit container out of a set of containers hosted on various underlying clouds Novel feature selection using Fuzzy C-Means clustering Adviser: Dr. Rajendra Roul GitHub: achyudhk/FCM-Feature-Selection <ul style="list-style-type: none">Features were selected using cosine similarity scores on the semantic centroids calculated from the normalized term-term correlation based on clusteringSelected features result in comparable F-scores for classification compared to MI and Chi² Semantic segmentation using a deconvolution network Neural Networks Course Project <ul style="list-style-type: none">Trained a deconvolution network to identify Red Blood Cells in an input image by predicting a binary segmentation mask	<i>Dec 2015 – May 2017</i> <i>Jan 2017 – May 2017</i> <i>Feb 2017 – Apr 2017</i> <i>Mar 2017 – Apr 2017</i> Reference: arXiv:1505.04366

	Video translation of American Sign Language gestures Nov 2016 – Dec 2016 Machine Learning Course Project GitHub: achyudhk/Sign-Language-Recognition <ul style="list-style-type: none"> Utilized hard negative mining, non-maximal suppression for localization and extracted histogram of gradients and local binary patterns as features Achieved an accuracy of ~99% on localization and 96.8% on top-5 classification (IoU metric)
	Identifying the trends in Indian Legislative issues using NLP Aug 2016 – Dec 2016 Adviser: Dr. Anoop Kumar GitHub: achyudhk/Parliamentary-Debate-NLP <ul style="list-style-type: none"> Identified the latent structures within the parliamentary debates using techniques like collocation finders, topic modelling, Ward clustering and multidimensional scaling Implemented the Rapid Automatic Keyword Extraction (RAKE) algorithm for key-phrase extraction
	Miscellaneous Projects <ul style="list-style-type: none"> Feed-forward Neural Network library using computational graph approach supporting multiple optimizers, common activation and loss functions Implementation of state of the art Deep Learning papers on Google SVHN and MNIST datasets Implementation of machine learning algorithms like Support Vector Machines, Principal Component Analysis, K-means Clustering, Fuzzy C-means Clustering in Python Design and implementation of MIPS single-cycle, multi-cycle and pipelined architectures Network Topology Simulation and Analysis using Wireshark, NS2, NAM, xGraph and AWK Multi-user chat service using socket programming with multicast and broadcast messages FTP client and server using socket programming BibTeX Parser and Code Beautifier for C using LEX and YACC Weather monitoring station design and simulation using μ-processor programming and interfacing
TALKS AND PRESENTATIONS	Department of Economics, BITS Pilani <ul style="list-style-type: none"> Monte-Carlo methods to assess the feasibility of biofuel production using simulation of economic models (Adviser: Dr. Rajorshi Sen Gupta) Nov 2015 Cross country analysis of statistical models for assessing the effect of economic factors on insurance penetration (Adviser: Dr. Aswini Kumar Mishra) May 2016 Rationality, uncertainty and cognition in financial markets An experimental approach using double auction asset market simulation (Adviser: Dr. Anoop Kumar) May 2017 Google Developer Group, Goa <ul style="list-style-type: none"> Leveraging the power of Virtualization, Docker and the Cloud Apr 2017
SKILL SET	Languages C, C++, Python, Java, C#, JavaScript, BASH, SQL, MongoDB, HTML, CSS, Verilog HDL, MIPS32 & x86 Assembly Platforms/Libraries Amazon Web Services, Google Cloud Platform, Firebase, Android Dev, Docker, L ^A T _E X, NumPy, SciPy, Scikit-Learn, Matplotlib, NLTK, Gensim, Keras, NetworkX, iGraph, Graph-Tool, Flask, Pandas, Scikit-Image, LEX, YACC, Git VCS
ACHIEVEMENTS	Institute Merit Scholarship — BITS Pilani Aug 2014 – Dec 2017 <i>Awarded six times</i> for being ranked within the top 1% of the university's students by GPA Research Travel Grant — IPCD, BITS Pilani Aug 2017 India Connect Research Internship — NTU, Singapore Only student from my university to be selected for both batches in the same year Won HackAttack 2017 — Intuit Inc. Jun 2017 Built Foresight, app that uses object detection, realtime database, and Google Places API to help the differently-abled navigate better Member of Student Faculty Council — Economic Course Review Aug 2015 – Dec 2015 Duke of Edinburgh International Award — Expedition, Bronze Category Jul 2013