

Kautsya KANU

PERSONAL DATA

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CODEFORCES:	codeforces.com/profile/kautsiitd	STACK OVERFLOW:	stackoverflow.com/users/4614493/kautsya-kanu

EDUCATION

2016	B.Tech. in PRODUCTION AND INDUSTRIAL Minor in Computer Science	IIT Delhi, New Delhi	GPA: 7.84/10 GPA: 8.18/10
2012	12 th CBSE	R.K.V.M, Gwalior	Percentage: 89.4%
2010	10 th U P Board	D.D.S.V.M, Budaun	Percentage: 87.0%

PROJECTS

MAY 2016	UnSupervised Decomposition of Multi Author Document
MAR 2016	Investigated the role of feature selection that captures the syntactic patterns specific to an author N-grams, POS tagging and PQ Grams based features were explored on the un-lexicalised Probabilistic Context-Free Grammar using Stanford POS Tagger and Parser to capture the distinct writing styles Elicited Segments using Gaussian Mixture Model learnt from iterative soft EM algorithm Trained Multinomial Naive Bayes classifier over Vital Segments using sk-learn in python
APR 2016	Named Entity Recognition for Real Estate Trained CRF Model using MALLET over tokenised Real Estate data of Delhi NCR for entity identification Used Gazetteers related to locations, first and last names, POS tagging and RegEx as features of words Explored Word Embeddings found using Word2Vec model on unlabelled corpus, to achieve high F score
MAR 2016	Unsupervised and Supervised Hand Written Digit Recognition Compared kMeans with PCA and GMM learnt using EM algorithm with PCA for Unsupervised clustering Learnt Neural Network with Non-linear activation function using Standard Back Propagation method in PCA space for Supervised Clustering of Hand Written Digits with help of PyBrain in python Tried to use Convolutional Neural Network and Auto Encoders for better Supervised Clustering
FEB 2016	Sentiment Mining and Domain Adaptation on Twitter dataset Extracted feature words using Lemmatisation and Stemming, Removed Stop Words and Normalised words with intensely repeating letters and used TFIDF based weighting for high frequency words Explored SVMs and Logistic Regression with L1 regularizer on sentiment vectors based on unigrams and bigrams of featured words comprising the classification space, trained using n-fold Cross Validation
APR 2015	Development of Artificial Intelligent Virtual Game Player and Designed GUI
APR 2013	Implemented MiniMax and Alpha-Beta pruning with Heuristics and achieved 5-ply for Quoridor Game. Conceptualized BOT with 3-ply and Designed GUI for n*n "TIC TAC TOE" and "2048" in python.
APR 2015	Bayesian Network Learning for Estimation of missing Data Learnt the Bayes net on healthcare dataset of more than 11000 patient records over 8 modelled diseases. Predicted using Expectation maximization algorithm and achieved less than 25% learning error.
JAN 2015	Multiple Sequence Alignment for DNA and Proteins Implemented IDA*, DFSnB for optimal solution, Clustal W with hill climbing for sub-optimal solution. 1st Runner-up in sub-optimal solution with less than 5% error from optimal solution among 142 students.
APR 2015	Designed a Processor in Logisim for interpreting Simple RISC Assembly Language
FEB 2015	Formulated NP class problem into CNF SAT formula and solved using SAT Solver named MiniSat
MAY 2016	3D Topology Generation and Simulation of Grinding Wheel, B Tech Thesis
JAN 2015	Generated active grain profiles by Image processing and Texture mapping on topographical projections Adapted Edge detection Canny algorithm, implemented Z Stack Method, estimated topology in MATLAB Simulated metal removal for predicting kinematic interaction between grinding wheel and workpiece

WORK EXPERIENCE

APRIL 2017 JUNE 2016	iOS Developer at HEADOUT, Bangalore Participated in two internal 1day Hackathons, built Flappy Bird like game using Sprite Kit and Location based nearby products searching feature for app. Revamped code from basic swift files to Xibs Revamped code base from MVC to MVVM and then to Redux type implementation in Swift using ReSwift Included many new features of swift along with Swift 3 transition, including 3D touch, Image Parallex
JULY 2015 MAY 2015	Backend Developer at ZIMPLY, New Delhi Added an extension for extracting images from Excel sheet, using VBA (Macros) Modified Image compression on EC2 Server using PIL and Cron, reduced downloading time on app Designed and Created Image Tagging, Chat-Box and modelled Database in Django Framework of python Proposed and Developed a Software with GUI in Tkinter python for Image operations Worked on Data compression algorithms Huffman, Arithmetic encodings, analyzed more than 10 Image formats and suggested 20% more optimal PJG format for Image compression compared to JPEG Extended PPO (Pre-Placement Offer) from organization for value added to company during internship

COMPETITIVE CODING

Jul 2017	Positioned among Top 10 contributors on CodeChef Discuss among 8000+ contributors
Sep 2015	Accomplished 58th Global Rank among 6000+ contestants in long contest, organized by CodeChef
Jun 2015	Positioned among Top 3 solvers in an optimization problem among 6000+ coders on CodeChef
Nov 2014	Two time Winner in IIT Delhi Coding Club organized by ACES-ACM, sponsored by HackerEarth
Oct 2014	Ranked 24th in IIT KGP online contest among 1600 worldwide participants, sponsored by HackerEarth

Ranked 5 Star(top 1% globally) among 1 Million coders on CodeChef Globally
Among Top .15% contributors globally on CodeChef Discuss and Maximum rated BLUE (Expert) on CodeForces

SCHOLASTIC ACHIEVEMENTS

2016	Minor Degree in Computer Science: Completed Minor Degree in Computer Science with GPA 8.18/10
2012	IIT Joint Entrance Examination: Secured 1329 (GE) rank among half million candidates
2012	All India Engineering Entrance Examination: Bagged 99.5 percentile among 1 million candidates
2010	U P Board Merit: District Topper and Second in Bareilly zone in High School Examination
2010	Honor Certificate: Awarded by Director, Science & Tech. Board UP for securing 100% marks in Maths

TECHNICAL SKILLS:

COURSES:	Intro. To Computer Science, Data Structure, Artificial Intelligence, Natural Language Processing, Machine Learning, Pattern Recognition, Analysis and Design of Algorithms, Computer Architecture, Operation Research, Econometric Methods, Digital Electronics, Signal and Systems
LANGUAGES:	C++, Python, Swift, MATLAB, C, JAVA, HTML, CSS, JS, mysql, VBA (macro), Verilog, Simple Risc, Latex, Django
OS & SOFTWARES:	MacOS, Ubuntu, Windows, Linux, Fedora, XCode, Logisim, Solidworks, AutoCAD, Creo, Ansys, CES