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	**IIT Delhi**, New Delhi	GPA: 7.84/10
	Minor in Computer Science		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%

Work Experience

July 2018 – Dec 2017 | **iOS Developer at** OYO**, Gurgaon**

- Worked on **Obj-C** and shifted codebase to Swift for faster Development
- Moved from MVC architecture to **VIPER**, proposed **Redux** type implementation in Swift using ReSwift

April 2017 – June 2016 | **iOS Developer at** Headout**, Bangalore**

- Managed iOS Development from **start to finish, Featured iOS app on Apple Store** in Travel Category
- Introduced SwiftLint(Implemented more than 60 rules) to **enforce Swift style and conventions**, Refactored codebase for better Readability, avoid Redundancy with access Control levels by proper OOP structure, including Swift specific Protocols, Extensions, Completion Block, Documentation and other
- Revamped and built various Pages and Models from Scratch, Transferred Swift Views and ViewControllers to **XIBs** for faster development and easy handling on different screen sizes using Auto Layout
- Shifted codebase to Swift 3 and featured app with Enhanced Notifications, Peek & Pop, Quick Actions, Deep Linking, Soptlight Search, Apple Pay, Core Animations, Transitions, Image Parallax and many others
- Worked closely with Design and Analytics team, Released and analysed various **AB Experiments** and Included concepts like Lottery, Banners, Similar Products, Gift Cards, Referrals to **increase conversion**
- Proposed and Included various **external Libraries**, Alamofire, Algolia, Appboy, Fabric, FBSDKKits, Firebase, SDWebImage, Segment, Stripe, SwiftyJSON etc. for **analytics, tracking crashes and AB testing**
- Optimised existing TableViews, CollectionViews, StackViews and Animations utilizing multi-threading, and tracking Memory allocations and Leaks, System Usage and Energy Logs by **XCode Developer Tools**
- Built Flappy Bird like game using **Sprite Kit** and Nearby products searching feature during Hackathon
- Moved from MVC architecture to **MVVM**, proposed **Redux** type implementation in Swift using ReSwift

July 2015 – May 2015 | **Backend Developer at** Zimply**, New Delhi (Internship)**

- Added an extension for extracting images from Excel sheet, using Excel Programming Language VBA
- 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 Software with Graphic User Interface 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 format

Extended **PPO (Pre-Placement Offer)** from organization for value added to company during internship

Competitive Coding

Sep 2017	Accomplished 7^{th} **rank** in India among 9500+ contestants in long contest, organized by CodeChef
Sep 2017	Ranked among **Top 3** solvers **Two times** in an optimization problem among 9500+ coders on CodeChef
Aug 2017	Positioned among **Top 3** contributors on CodeChef Discuss among 8000+ contributors
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

CodeChef: Orange Rated (Top 0.2%) | **CodeForces:** BLUE(Expert) | **CodeChef Discuss:** Among Top 100

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 of Science & Technology Board,UP for securing **100%** marks in Maths

Projects

Apr 2015 – Apr 2013 | **Development of Artificial Intelligent Virtual Game Player and Designed GUI**
•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.

May 2016 – Mar 2016 | **UnSupervised Decomposition of Multi Author Document**
•Investigated role of feature selection that captures syntactic patterns specific to an author, on baseline
•N-grams, POS tagging and PQ Grams based features were explored on un-lexicalised Probabilistic Context-Free Grammar using Stanford POS Tagger and Parser to capture 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 & 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 Clusturing

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 classification space, trained using n-fold Cross Validation

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.

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 – Jan 2015 | **3D Topology Generation and Simulation of Grinding Wheel, B Tech Thesis**
•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

Technical Skills

Courses | Data Structure, Artificial Intelligence, Natural Language Processing, Machine Learning, Pattern Recognition, Analysis and Design of Algorithms, Computer Architecture, Database Management System(DBMS), Operation Research, Econometric Methods, Digital Electronics, Signal and Systems

Languages | C++, Python, Swift, MATLAB, C, JAVA, HTML, CSS, JS, mysql, VBA, Verilog, Simple Risc, Latex, Django

OS & Softwares | MacOS, Ubuntu, Windows, Linux, Fedora, XCode, Eclipse, Git, Logisim, Solidworks, AutoCAD, Ansys