Kapil Agrawal

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2014–20	**Bachelors in Electrical and Electronics Engineering**, Bits Pilani.
	Masters in Economics, Bits Pilani.
CGPA	**7.36 (after 6th semester)**.

Professional Experience

May-Jul'16 — **Credit Risk Analysis Intern, Indian Bank, Chennai**.
- Performed Data Analysis and Classification techniques on the past credit risk data to create the risk model which predicts credit risk and aims at minimizing the credit risk incurred in the bank.
- The dataset contained the details about the 65535 customers with each row having 23 attributes of their loan details, used decision tree classifier to train the model. **Link**.

Jun-Jul'15 — **Summer Intern at Amal Project, American University of Cairo, Egypt**.
- Taught mathematics to the students of age-group 10-12 years and helped them physically as part of Amal Project which aimed to develop the entrepreneurship and innovation mindset for the youth of Egypt through sessions delivered by volunteers from all around the world.

Key Projects

August'16 — **Prediction of House prices**.
- Machine learning model created using various regression techniques like coordinate descent, gradient descent was used in predicting house prices.
- Total 21612 datapoints each with 21 attributes were used and important features were found to be price, squarefeet living, number of bedrooms, number of bathrooms, number of floors.
- The model created was opitimised using techniques like ridge regression, L1 and L2 penalties, and finding best values of parameter lambda using crossvalidation and Kfold validation techniques. **Link**.

September'16 — **Sentiment Analysis on Amazon product reviews**.
- Sentiment analysis was performed on the Amazon dataset consisting of baby product reviews, using logistic regression classifier and the linear classifier
- Implemented the logistic regression from the scratch, and used various evaluation metrices like classification accuracy, confusion matrix, precision and recall. **Link**.

October'16 — **Clustering celebrities using Wikipedia dataset**.
- Found the nearest neighbours of different celebrities in the wikipedia's people dataset using KNN algorithm
- Clustered wikipedia documents using K-Means algorithm and explored how the results vary with number of clusters.
- LSH (locality Sensitive Hashing) was used to make the searching process faster. **Link**.

2015-Present — **Web and Mobile Applications**.
- Built data driven application which displays the detail of many Restaurants where user can perform CRUD operations. Used flask frameworks and SQLAlchemy, made an API Endpoints for Get Requests using Jsonify class. **Link**.
- Created web application which finds brief information about any famous street of the world. Used Wikipedia API and Google streetview API to implement this action.
- Designed web-page which lists my favorite movies and show their trailers.
- Created page to display Restaurant Menu through the Angular JS framework.
- Built an android app to keep track of score of the basketball match. **Link**.

Sep-Nov '15 — **Equity-Research Initiative**.
- Analyzed Tata Motors Ltd. for 2 months by performing Fundamental, Technical and Ratio Analysis; Constructed Valuation models for the company as a part of Mentored-Research Equity Research Initiative program. **Link**.

Positions of Responsibility

2016-17 — **Hostel Representative**.
- Taking responsibility of handling problems of over 180 students and also looking about the proper functioning of hostel infrastructure and student necessities
- Organized and managed intra hostel sport and cultural competitions

2016-17 — **Anti-Ragging committee member**.
- Part of the 4-member committee which looks after the happening of severe case of ragging in the college

Technical skills

Languages	C, Python, Java, SQL, HTML, CSS, JavaScript
Frameworks	jQuery, AngularJS, Bootstrap, Flask
Tools	Android, Git, LaTeX, Matlab, Jupyter
OS	Linux, Mac OS, Windows

Scholastic Achievements

2010	Awarded **National talent Search Examination (NTSE) scholarship** by the Government of India in 2011 after 2 rounds of exam and an interview; In top 1000 out of 300,000 students
2012	Achieved **All India Rank 389** in National Science Olympiad organized by NSOF
2010-11	Secured **International Rank 89th in 4th and 125th in 3rd** International Mathematics Olympiad
2012	Secured **1st** position in ResoVista organized by Reasonance, awarded laptop as a prize
2014	All India Rank **5717** in **IIT Joint Entrance Examination** among 1.4 million students
2010-11	Achieved **11th state rank in 8th grade** and **14th state rank in 9th grade** in Maharashtra Talent Search Examination (MTSE)
2010	Secured **254th All India Rank** in National Cyber Olympiad organized by NSOF

Extra-Curriculars

2008–12	**Captain of School Under-14 and Under-16 Cricket Team**; Got selected for state level bowling trials
2010–11	Played Inter school chess and table-tennis competition at **divisional level**
2012	**Captain of Under-16 school baseball team**
2014	Taught Maths, Physics and Chemistry to students of 10th grade while being a part of National Service Scheme(NSS), BITS Pilani
2015	Learned Languages; **beginner in Egyptian Arabic** and **beginner in Spanish**
2015	Won the intra hostel cricket tournament during the Bits Open Sports Meet
Present	Learning Photography and Martial Arts

Relevant Coursework

CS/Electrical	Computer Programming, Computer Graphics, Image Processing, Software Defined Networking, Control Systems, Signals and Systems, Microelectronics Circuits, Microprocessors and Interfacing, Electrical Machines, Electromagnetic Theory, Electronic Devices, Digital Design, Data Communication and Networks, Electrical Sciences
Economics	Applied Econometrics, Public Finance, Public Policy, Security Analysis and Portfolio Management, Derivatives and Risk Management, Mathematical and Statistical Methods, Econometric Methods, Macroeconomics, Money Banking and Financial Institutions, International Economics, Marketing Research
Online	Data Science, Statistics, Data Structures and Algorithms, Full Stack Foundations
Mathematics	Calculus, Linear Algebra, Complex Analysis, Differential Equations