



# KAUTSYA KANU



## ACADEMIC DETAILS

Year	Degree / Exam	Institute	GPA/Marks(%)
----	B.Tech in Production and Industrial Engineering	Indian Institute of Technology Delhi	7.818
2012	CBSE	R K V M Gwalior	89.4%
2010	U P Board	D D S V M Budaun	87.0%

## SCHOLASTIC ACHIEVEMENTS

- **Minor Degree in Computer Science** : Completed **17 credits** in Computer Science with **GPA 8.6/10** Present
- **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 2012
- **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 2010

## INTERNSHIPS

- **Zimply, New Delhi** (May, 2015 - July, 2015) :
  - **Added an extension** for extracting images from Excel sheet, using **VBA (Macros)**, decreased time by manifold
  - Modified **Image compression** on **EC2 Server** using **PIL** and **Cron**, reduced downloading time on app efficiently
  - 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, **quartered** effort and time
  - 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 preceding format **JPEG**
- Extended **PPO (Pre-Placement Offer)** from organization for value added to company during internship

## PROJECTS

- **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** (Apr 2015)
  - Conceptualized BOT with **3-ply** and Designed GUI for n\*n "TIC TAC TOE" and "2048" in python (Jan 2013-Apr 2013)
- **Bayesian Network Learning for Estimation of missing Data (Apr, 2015)** :
  - 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 from golden data
- **Multiple Sequence Alignment for DNA and Proteins (Jan, 2015)** :
  - Implemented **IDA\***, **DFSBnB** for optimal solution and **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
- **Formulated NP class problem into CNF SAT formula and solved using SAT Solver named MiniSat (Feb 2015)**
- **Designed a Processor in Logisim for interpreting Simple RISC Assembly Language (Apr 2015)**
- **3D Topology Generation and Simulation of Grinding Wheel, B Tech Thesis (Jan, 2015 - Present)** :
  - Generated active grain profiles using Image processing and **Texture mapping** on topographical projections
  - Adapted Edge detection **Canny** algorithm, implemented **Z Stack Method** and estimated topology in **MATLAB**
  - Creating metal removal **simulation** for predicting kinematic interaction between grinding wheel and workpiece

## TECHNICAL SKILLS

- **Relevant Courses**: Intro. To Computer Science, Data Structure, Artificial Intelligence, \*Analysis and Design of Algorithms, Computer Architecture, Operation Research, Econometric Methods, Digital Electronics, Signal and System
- \*Course pursuing this semester
- **Programming Languages**: C++, Python, C, Django, HTML, CSS, JS, mysql, VBA (macro), Verilog, Simple Risc
- **OS and Softwares**: Ubuntu, Windows, Linux, MATLAB, Logisim, Solidworks, AutoCAD, Creo, Ansys, CES

## EXTRA CURRICULAR ACTIVITIES

- **Competitive Coding** :
  - Positioned among **Top 3** solvers in an optimization problem among **6000+** coders on **CodeChef** (Jun, 2015)
  - Accomplished **148th Global Rank** among **8000** contestants in long contest, organized by CodeChef (Jan, 2015)
  - Ranked **24th** in **IIT KGP** online contest among **1600 worldwide** participants, sponsored by **HackerEarth** (Oct, 2014)
  - **Two time Winner** in **IIT Delhi** Coding Club organized by **ACES-ACM**, sponsored by HackerEarth (Sep & Nov, 2014)
  - Currently ranked **289** among **43000** coders on CodeChef; max. rated **BLUE (Expert)** on **CodeForces**
- **Other Interests** : Solving logical puzzles, Coding, Chess, Theoretical Physics, Sketching