

# Mayank Sharan

Sr. Data Scientist, Bidgely, Bangalore

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## EDUCATION

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- **B. Tech. (Computer Science and Engineering)** Indian Institute of Technology, Delhi, India  
*GPA: 9.043* July 2014 – May 2018
  - Specialization in Data Analytics and Artificial Intelligence
- **Class XII, CBSE** DAV Pushpanjali, Delhi, India  
*Percentage : 96.4 %* 2014
- **Class X, CBSE** DAV Pushpanjali, Delhi, India  
*GPA : 10.0* 2012

## WORK EXPERIENCE

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- **Bidgely Technologies** Bangalore, India  
*Data Scientist* July 2018 - Present
  - Leading design and development of the Next Best Interaction Engine (A hybrid recommender system)
    - \* Combines multitudes of data sources to identify most suitable interaction to be presented to a user
    - \* Achieved a Mean Reciprocal Rank (MRR) of 0.89
  - Developed state of the art short term load forecasting framework
    - \* Achieved a MAPE of 0.392 for 1-day ahead forecast beating the previous SoTA by over 35%
    - \* Original proof of concept developed in 24 hours won Bidgely Hackathon 2019
  - Developed completely data driven day level season detection module
    - \* Season boundary identified within the margin of error of  $\pm 7$  days across continents
  - Spearheaded python migration of the complete AMI disaggregation suite
    - \* Developed the complete code base, achieving over 10x increase in throughput
    - \* Optimized and ported multiple modules with speedups ranging from 6x to 12x
  - Developed vacation detection algorithm version 2 delivering >10% improvement in F1-score
  - Supervised project to estimate gas consumption from electric data, achieving >75% accuracy

## INTERNSHIPS AND PROJECTS

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- **Indian Legal Dataset Analysis** Indian Institute of Technology, Delhi  
*Prof. Mausam, Bachelor Thesis Project* July 2017 - May 2018
  - Worked on District courts data from over 250 districts scraped and databased
  - Generated analysis, comparisons and rankings based on metrics and parametric modeling
  - Developed models to predict the likely duration of a court case at the time of filing
  - Results and analysis available at the following site. Report available here
- **Estimation of Lighting Power Consumption** Bidgely, Mountain View, CA  
*Data Science Intern* May - July 2017
  - Created algorithm to estimate lighting power consumption for 15, 30 and 60 minute frequency energy data
  - Integrated and deployed module currently live for 20+ million homes across the globe
  - The algorithm was patented. Patent available here
- **Detecting Severity of Smoking Addiction via Eye Tracking** Indian Institute of Technology, Delhi  
*Prof. Rahul Garg, Research Project* May 2016 - May 2018
  - Created novel paradigm with eye tracking tasks to detect severity of smoking addiction
  - Developed eye tracking stabilization module to obtain consistent data from the eye tracker
  - Developed end to end software for administering the test and collecting eye tracking data
  - Extracted features from collected data and was able to predict FTND scores

## OTHER PROJECTS

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- **Summarization of News Articles using Pointer-Generator Networks:** Modified the current SoTA to improve abstract summaries qualitatively. (*Report*)
- **Multiplayer Online Game:** Developed game from scratch with immersive sound effects using JavaFX, Swing and UDP. (*Jar*)
- **Visual Question Answering:** Created a CNN-LSTM based VQA network to compete in MS-COCO VQA contest
- **Compiler Design:** Built end to end compiler with modules for scanning, parsing, tokenizing, AST, assembly code and execution
- **News Item Classifier:** Naive Bayes Classifier that categorizes news items into 8 categories with 90% accuracy

## RELEVANT COURSES

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- **Computer Science:** Natural Language Processing, Artificial Intelligence, Deep Learning, Machine Learning, Advanced Computer Networks, Computer Networks, Theory of Computation, Logic for Computer Science, Analysis and Design of Algorithms, Data Structures and Algorithms, Operating Systems, Design Practices, Database Management Systems, Parallel and Distributed Programming, Programming Languages, Digital Logic and System Design, Computer Architecture, Introduction to Computer Science
- **Mathematics:** Algebra, Discrete Mathematical Structures, Probability and Stochastic Processes, Linear Algebra and Differential Equations, Calculus
- **Miscellaneous:** Introduction to Electrical Engineering, Signals and Systems, Sociology of India, Introduction to Psychology, Philosophy of History, Microeconomics

## TECHNICAL SKILLS

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- **Languages:** C, C++, Java, Python, SML, MATLAB, HTML, CSS, PHP, SQL, NoSQL, javascript, jQuery
- **Frameworks and Cloud:** Apache Spark, Hadoop, AWS, Azure, IBM
- **Libraries and IDEs:** PyTorch, PyCharm, Android Studio, NS3, Mininet

## SCHOLASTIC ACHIEVEMENTS

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- **Semester Merit Award:** Received Semester merit award for being in top 7% of class for 2 semesters at IIT Delhi
- **ICHO, 2014:** Invited for Orientation cum Selection Camp for being in the top 35 among over 30,000 applicants
- **KVPY, 2012:** Selected as a fellow in the young scientist program conducted by IISc, Bangalore
- **IIT JEE, 2014:** All India Rank 68 among 1.5 million applicants
- **INPhO, 2014:** Selected to appear for being in top 1% applicants for NSEP, 2014
- **INAO, 2014:** Selected to appear for being in top 1% applicants for NSEA, 2014

## EXTRA CURRICULAR ACTIVITIES

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- Chief Adjudicator for IIT Delhi Parliamentary Debate 2018, with over 32 teams and 100 adjudicators
- Junior Diploma in Hindustani Classical Music from Prayag Samiti, Allahabad
- Vocalist at the Eastern Music Society Mridang performing at numerous events
- Breaking adjudicator at national level debates, Trivium, 2015 and IITPD, 2016
- Helped preparing financially challenged kids for IIT JEE with teaching and doubt clearing sessions