

Rishabh Jain

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Research Interests

Artificial Intelligence, Machine Learning, Design and Optimization of Algorithms, Human Computer Interaction, Distributed Caching

Education

2011-2015

Netaji Subhas Institute of Technology, University of Delhi

BE in Computer Engineering

CGPA: 7.57

- *Thesis Topic:* [Gesture Recognition System and Cursor Control](#)
- *Project Supervisor:* [Dr. Satish Chand](#)

Professional Experience

October, 2017

Senior Associate, Morgan Stanley

- Present

▪ [Trade Anomaly Detection](#)

- Used machine learning techniques to develop a tool that flags unusual trading activity
- Extracted huge volume of historical trading data for training SVM classifier
- Trained SVM classifier and re-sampled the data multiple times to address *Class Imbalance* problem

September,

Senior Consultant, Morgan Stanley

2015 –

Senior Software Developer, Accolite Inc.

October 2017

▪ [ObjectModel and Distributed Cache](#)

- Implemented a distributed “Gemfire” caching system, which allows clients with extremely fast access to data.
- Created REST and SOAP based Web Services on top of cache
- *Key Achievements:* Brought down the latency of web service to 50-60 ms as compared to 2 seconds earlier.
- Handling 5000 requests per second, system was running 200 million evaluations in 12 hours, same used to take more than 2 weeks before.

July, 2015 –

Software Engineer, Accolite Inc.

September

▪ [Conference Room Management System \(CRMS\)](#)

2015

- Developed a fast, secure and user-friendly web application that lets a user book a conference room across all the locations of a company
- Implemented features such as admin override feature and email notification features.
- Responsible for developing restful APIs for website and optimized by caching generic requests using Guava cache.

June, 2014 – **Intern, Samsung Research Institute**

July 2014 ■ **Access Control System**

- Analyzed several research papers and implemented several One Time Password (OTP) algorithms including TOTP, HOTP, and OCRA.
- Developed an android application for access control system using One Time Passwords

Academic Projects

January, 2015 **Gesture Recognition System and Cursor Control**

- June, 2015 *Advisor: Dr Satish Chand*

- Developed a tool to recognize hand gestures in real time using web camera
- Implemented a Haar-feature cascade classifier using OpenCV library in C++
- For controlling cursor, used K-means to find best k cluster centers of RGB values of pixels in image,

August, 2014 **C Compiler**

- Dec, 2014 *Course Project, Compiler and Translator Design*

- Built a C Compiler with following features: Data Types, Operators, Functions (with return type and recursion). Input programs pass through five stages (lexical analysis, syntax analysis, semantic analysis, intermediate code generation, and final code) to give assembly code

Personal Projects

Part of Machine Learning course from Coursera (final grade 98.2%)

- *Spam Detection System*: Preprocessed and tokenized raw emails, trained SVM to detect spam
- *Movie Recommender System*: Predicted user ratings and made recommendations based on preferences. Used conjugate gradient algorithm to minimize regularized cost function for collaborative filtering
- *Handwritten Digit Recognition*: Implemented back propagation and performed hyper-parameter optimization on feed forward neural network architecture to recognize handwritten digits from MSNIT database.

Automatic Language Detector [[link](#)]

- Given a piece of text, developed a tool that detects the language of that text with 100% accuracy.
- Build an index of all the words in the data set of four different languages for faster response
- Applied Bayes algorithm on each word of given text to detect the language.

Arihant Associates Website [[link](#)]

- Developed a fast, user-friendly and scalable website for my father's business firm
- Responsible for end to end design, development and deployment.

Technical Skills

- **Languages:** C, C++, Python, MATLAB, Java, JavaScript
- **Frameworks/Libraries:** Apache CXF, Spring Data, Spring JDBC, Hibernate, Scikit-learn
- **Databases:** Sybase, MySQL
- **Versioning Tools:** Git, Perforce

Awards/Achievements

- Top Performer of the Year 2015-16 at Accolite
- Exceptional Talent Award Oct-Dec 2016 At Accolite
- AIEEE rank of 3105 among 1.1 million students
- "Expert" rating at online programming website [Codeforces](#)
- Selected for onsite regionals at ACM-ICPC 2014. Among 200 teams selected in 1500+ teams for onsite regionals.

Extra Curricular Activities

- A naïve blogger at [Rishabh Jain's Corner](#)
- Organized cultural fest *Moksha'14* and *Resonanz'13* at NSIT
- Won intra college Volleyball tournament during NSIT Sports Week February, 2013
- Runners up in intra college TT tournament 2013