

# Chirag Jain

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## EDUCATION

### North Carolina State University, Raleigh (Master of Computer Science)

December 2018

Coursework: *Design and Analysis of Algorithm, Database Management System, Object-Oriented Design and Development*

### University of Mumbai, D.J. Sanghvi College of Engineering (Bachelor of Computer Engineering)

May 2014

Coursework: *Artificial Intelligence, Advanced Database Systems, Algorithm Analysis, Data Mining and Machine Learning.*

GPA: 3.7

## PROFESSIONAL EXPERIENCE

### JPMorgan Chase & Co. (Associate)

July 2014-July 2017

- **Led a team** to deliver an **Informatica** project that centralized Market Data and **reduced time** for analytics by hours.
- **Reduced process's total run-time** from days to hours by creating necessary partitions, Indexes and batches in SQL.
- Developed **ETL** processes using **Python, Shell script, Java and HP-Vertica** to load Mortgage related performance data and performed analytics on this data to calculate patterns and reports for trade execution and prediction models.
- Acted as the **Release Manager** and designed **Automated deployment system** to assure quality code, testing and security.

### Pratham Education Foundation (Technical Lead)

August 2016- August 2017

- Leveraged **"Joget Tool", Java and Microsoft Azure** to create a mobile-ready, **cloud-based** HR and Expense Management that helped the NGO in automating their manual tasks and scaling-up operations with a projected **savings of \$150,000 per year**.
- Designed and co-implemented **Selenium test-suite** to facilitate sustainable development for the NGO.

### ShipEasy (Co-Developer)

September 2013- September 2014

- Developed an SEO optimized responsive online web portal using **PHP, Bootstrap, and JavaScript**. Incorporated **Google Maps API** to generate shipment quotation using distance, cargo and other metrics. Also, designed a rule-based reminder system.

## SKILLS AND TECHNOLOGIES

- **Languages:** **Python** (proficient), **Java** (proficient), C# and Shell Script.
- **Databases:** MySQL, MS-SQL and HP-Vertica.
- **Web Technologies:** HTML, jQuery, PHP, JavaScript, and CSS.
- **Software:** SQL Server Management Studio, Business Intelligence Development Studio, Informatica, Git, Vim and Eclipse.

## PROJECTS

- **Capstone: Retrieving, Processing, and Visualizing Data**, Michigan University:  
Developed a search engine index using **web-crawler** and **"Page-rank" algorithm** written in **Python**. Mapped and cleaned an email dataset to analyze various dimension like sender's domain, word frequency, email count. Visualized the inbound and outbound links in form of connected graphs and histograms using D3.js library.
- **Machine Learning**, Stanford University:  
Implemented **Clustering, Classification, Recommender systems using Regression and Neural-Networks** Machine Learning Algorithms in **Octave**.
- **Optimization of Traveling Salesman Problem using Neural Networks:**  
Implemented a hybrid approach that comprises an **Adaptive Neuro-Fuzzy Inference System** and **Simulated Annealing** algorithm to determines the path based on distance and other factors like profit. **Published journal articles in IJCSSE** about the theory and implementation of this project.
- **Data Warehouse and Mining Tool with ETL:**  
Performed extraction of data from different file formats, data cleaning and loading the consolidated data into MS-Access database. Implemented various **Data Mining** algorithms like **Naïve Bayes, K-Nearest Neighbors and Hierarchical Clustering** on the consolidated data using **Java**.
- **Microdata API for Servo, browser engine from Mozilla Research:**  
Contributed to the Servo **open source project** by designing algorithm to extract **machine-readable metadata** in web content using Rust, programming language. This metadata is used to create vCard/vEvent file with the help of servoshell embedding.

## ACHIEVEMENTS AND EXTRACURRICULARS

- **Winner of 'Code for Good Challenge' Hackathon:** Developed a cross-platform mobile web application and IVR/SMS system for "Teach for India", targeting to resolve their operational problems of tracking attendance, of their fellows and students.
- **Voluntary Service, 'Force for Good' Ambassador and Judge:** Participated in philanthropic initiatives and developed technology solutions for partner NGOs. Counseled the NGOs on various automation opportunities.
- **Campus-Recruitment Coordinator** for Computer Engineering department: Operated as a channel of communication between students, recruitment cell and the company representatives.