

Somdeep Dey

sd2988@columbia.edu | 45 Tiemann Place, Apt 1G | New York, New York, 10027 | 9292878549

Education

Columbia University

Masters in Computer Science, Software Systems, Graduating

December 2016

Courses: Analysis of Algorithms, Cloud and Big Data, Advanced Software Engineering,
Micro Services Apps and APIs, Operating Systems, Database Systems Implementation

GPA: 4.0/4

Pune Institute of Computer Technology (PICT)

Bachelor of Engineering in Computer Science, Graduated

May 2015

Courses: Operating Systems, Compilers, Advanced DBMS, Algorithms, Software Architecture, Distributed OS

GPA: 3.6/4

Experience

Columbia University

Graduate Course Assistant

January 2016 Present

- Programming for Entrepreneurs in the SIPA school, grading and assisting students with building websites.
- Topics in Software Engineering in the CS department, providing feedback as students research topics.

Selected Projects

Open Source Work

- **'FaSteR Spaceman'** (XFS - Jan 2015): Incorporated utilities using C, in defragmenter of Linux based filesystem XFS.
 - 'Spaceman': generated free space report of the overall filesystem, enabling freespace defragmentation.
 - Made headway into partial defragmentation (portions of large files), hitherto untried across file systems.
 - Dave Chinner, maintainer of XFS, reviewed all patches, features were included in the Linux Kernel (3.19).

School Projects

- **'Flatmate.io'** (Columbia-Dec 2015): MEAN stack website on Bluemix connecting users to potential roommates.
 - Collaborative filtering using Facebook and LinkedIn data, thus aligning personal and professional matches.
 - Auto-scaling messaging infrastructure to ensure users have real-time connectivity and face no downtime.
- **'Student-Course Management System'** (Columbia-Oct 2015): K-12 system using micro services architecture.
 - Implemented z-axis scaling, live schema change for administrators, single point of reference API gateway, ref-integrity using RabbitMQ, auto instance creation on increased data and data partitioning on surnames.
- **'TweetGeo'** (Columbia-Sept 2015): Java Web App on AWS Elastic Beanstalk depicting tweets in real time on a map.
 - Twitter Live API data streamed to map using WebSockets, depicting trend heatmap geographically.
 - Sentiment analysis of tweets using multi-threaded worker pool, highlighting public opinion of events.
- **'Virtual Learning Environment'** (PICT-2014): Java-based VLE, permits upload/download of assignments and videos.
 - Private cloud infrastructure on Eucalyptus for use only within PICT Computer Science department.
 - Role based access control, discussion board for interaction, email updates, timetable export and import and adaptive tests, and all ensuring one-stop solution for department's academic needs.

Technical Skills

- Java, C, C++, SQL, Python, Linux, Hadoop, XAMP, Apache, Git, JavaScript, HTML, Bootstrap, Angular, Node.js, PHP, AWS, Mongo

Achievements

- 'FaSteR Spaceman' discussed by experts at Linux Filesystem Storage and Memory Management Summit (LSFMM - 2015).