

TATHAGATA DASGUPTA

SKILLS

- LANGUAGES: Python, Java, C/C++, Bash, PHP, HTML5, CSS3, JQuery, JSP/Servlets, Android/Phonegap
- TOOLS: GCC, Make, GDB, git, SVN, Emacs, Vim, Eclipse
- DATABASE: MongoDB, MySql, Oracle, PostGre SQL
- ENVIRONMENT/PLATFORMS: Unix, GNU/Linux, Windows Server

WORK EXPERIENCE

- 2013- PRESENT Technology Associate, Bank of America Merrill Lynch, Chicago
I work on the Bank's proprietary cross-asset technology platform Quartz - a complete Python stack consisting of myriad mix of technologies like functional reactive frameworks, microservices, globally replicated object store, and high-throughput/low-latency messaging system. As a member of scrum team, I work with Global Market operations to gather requirements through spec by examples, design and implement solutions to deliver fully tested code in a fast-paced environment. I have worked on high-performance trade matching, confirmation generation, and workflow management frameworks and integration of a SaaS solution for customer engagement.
- 2011- 2013 Research Assistant, Dr. Mark Grechanik, University of Illinois, Chicago
Application of information retrieval techniques for solving problems that lie at the intersection of data privacy and software traceability using Python, Java, bash scripting, MongoDB
- 2012 SUMMER Developer Intern, Xaptum.com
Worked directly with the CEO on product strategy and vision. Designed and implemented key modules of an Internet of Things platform with RabbitMQ, Java OSGi, Spring-WS.
- 2007-2009 Project Engineer, Wipro technologies, India
Service orchestration in Aqualogic Service Bus Java Web Services for *Farmers Insurance*. Automated manual maintenance jobs, permanent fix to long standing issues in legacy applications, increased team productivity with a Lucene based search engine for system maintenance technical documents.

EDUCATION

- 2011- 2013 Master of Science, Management Information Systems, University of Illinois, Chicago
Data Mining & Information Retrieval, Marketing Analytics, E-Marketing, System Analysis & Design, Entrepreneurial Product Development: Licensing, Audit & Control of Information Systems, Enterprise Infrastructure Planning & Information Security
- 2003-2007 Bachelor of Technology in Computer Science and Engineering, West Bengal University of Technology, India
Computer Algorithms, Computer Networks, Artificial Intelligence, Database Management Systems, Compiler Design, Advanced Computer Architecture, Advanced Algorithms

HONORS

- 2011 Knight-Mozilla News Challenge, Berlin
Knight News Challenge accelerates media innovation by funding breakthrough ideas in news and information. I was one of the 20 finalists selected worldwide for a week long hackathon and built a number of data visualization and information retrieval tools.
- 2012 Google Chicago Coding Challenge
Built a real time teacher student interaction system for large classrooms that would encourage students to ask questions using different Google technologies.

VOLUNTEERING

2014- PRESENT Director of Mentorship, Chicago Python User Group

As a co-organizer of one of the most active technology groups in the country, I organize monthly meetups and have started a programming mentorship program that is free and completely volunteer driven. Over the last year and half I have worked with over 60 developers bringing mentor & mentees together for hands on programming events. <http://www.chipy.org/pages/sigs/mentorship/>

2015- PRESENT Web Enabler, Asha for Education, Chicago

Asha for Education is an award winning charitable organization with branches all over the globe working to fund education for underprivileged students in India. I built a fund-raising website for Bank of America Marathon participants who were running to support Asha's cause. It raised over 15,000 dollars for education of 50 students in India within 5 months. Currently I am working to build a generic interface that would streamline fund-raising activities for Asha chapters worldwide. <http://ashanet.org/chicago/events/2015/marathon/>

PUBLICATIONS

- **Tathagata Dasgupta**, Mark Grechanik, Evan Moritz, Bogdan Dit, Denys Poshyvanyk: *Enhancing Software Traceability by Automatically Expanding Corpora with Relevant Documentation*. *IEEE International Conference on Software Maintenance, 2013*

Traceability is establishing link between software requirement documentation and source code. The existing approaches for traceability applied natural language text mining algorithms on the code base, overlooking the fact that source code is an abstract form. We reduced the semantic distance between source code and requirement by expanding the abstract syntax tree of Java programs with jdk documentation that increased the precision of recovering traceability links by 9% on average

- Mark Grechanik, Collin McMillan, **Tathagata Dasgupta**, Denys Poshyvanyk, Malcom Gethers: *Redacting sensitive information in software artifacts*. *IEEE International Conference on Program Comprehension, 2014*

In the past decade, there have been many well-publicized cases of source code leaking from different well-known companies. We proposed a solution of detecting sensitive information, automatically refactoring them without significantly losing code comprehensibility.