

# Sumit Singh

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EDUCATION        Highest Degree: Masters in CSE, IIT Kanpur.

RECENT WORK     *Software Engineer on Android Platform - Directi*  
                      Time: Feb 14 onwards.  
                      Product: Tring - voip client.

- worked in Java, JNI, C, XML with emphasis on good code design.
- developed initial prototype alone using pjsip.
- worked in a team of 2 for initial 10 months.
- a significant amount of time was invested to ensure quality and specifically echo.
- experimented with a lot of voice/media stacks with some tweaks of our own.
- experimented with continuous build system and analytics.
- wrote functional tests for an earlier version of the app (no quality test).

*Software Engineer on Android Platform - Directi*  
Time: Sep 13 - Jan 14.  
Product: talk.to - rich text client.

- Tools: Ant, Monitor (Android Performance tool), Java profiler (YJP).
- Test: Unit testing(junit) and functional testing (android specific).
- Some great insights : e.g. reasons for low user onboarding(successful signup) rate, why pivoting the product (did twice when I was there).

*Training project at Directi*  
Time: Jul 13 - Sep 13. Product: similar to twitter - web client and server.

- Languages: Java, Javascript.
- Build Tool: Maven.
- Database: PostgreSQL, Redis.
- Other: Java Spring MVC framework, Apache http server.

SELECTED           Sumit Singh and Shashank K Mehta, "*An Improved Approximation ratio for Prize Collecting Steiner*  
RESEARCH WORK   *Forest Problem in Node Weighted Planar Graphs*", part of M.Tech thesis.

Pawan Aurora, Sumit Singh and Shashank K Mehta, "*Partial Degree Bounded Edge Packing Problem with Arbitrary bounds*", Proceedings of FAW-AAIM, Lecture Notes in Computer Science, vol 7924, pp 24-35, 2013.

Sumit Singh, "*A Local Approach for Identifying Clusters in Networks.*", arxiv:1203.4685, 2012.

Sumit Singh and Ayushi Garg, "*Towards The Adaptive Questionnaire Generation Using Soft Computing*", Proceedings of NaBIC, pp 806-811, 2009.

MASTER'S THESIS I worked with Prof. Shashank K Mehta to improve approximation algorithms for certain graph based problems. We were able to improve the state of the art in the two of the three problems.(at the time of thesis defence).

ACADEMIC           Teaching Assistant for Algorithms II (Jan 12 - May 12).  
POSITIONS OF       Teaching Assistant for Randomized Algorithms (July 11 - Dec 11).  
RESPONSIBILITY   Teaching Assistant for C Programming Lab (July 10 - May 11).

INTEREST &       playing snooker and basketball.  
HOBBIES           have settled for listening music as people struggled to realize my vocal talents.  
                      trekking - discovered it recently and its fun. Thanks to the Himalayas.