

Mihir P Mehta

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Education	Ph.D. in Computer Science , University of Texas at Austin. (2014 - present) GPA: 3.83/4 (Spring 2015) B.Tech. in Computer Science and Engineering (CSE) , Indian Institute of Technology (IIT) Delhi. (2009 - 2013) GPA: 7.9/10 Exchange semester , Ecole des Mines, Saint-Etienne. (2011)
Professional Experience	Software Engineer at Samsung Research Institute, Noida, India. (2013-2014) <ul style="list-style-type: none">• Optimised the Linux kernel for Samsung's Android devices.• Improved core components of the Linux virtual memory subsystem. Software Engineering Intern at Intel Corporation, Austin, TX, USA. (2015) <ul style="list-style-type: none">• Built a Pintool to map dynamic memory accesses in executables to data structure elements in the corresponding C++ source code.• Used several static analysis algorithms to get more fine-grained information for the purpose of dynamic analysis.
Research Experience	Program verification in object-oriented languages with Professors Isil Dillig and Thomas Dillig, CS department, UT Austin. (2014-2015) <ul style="list-style-type: none">• Developed a prototype verifier based on Hoare logic and weakest pre-conditions using the Soot compiler framework to generate verification conditions and the Z3 theorem prover to discharge them.• Successfully found bugs in test programs and generated example inputs demonstrating the bug in each case. Algorithms for bisimilarity with Professor S Arun Kumar, CSE Department, IIT Delhi (2012-2013) <ul style="list-style-type: none">• Conceptualised and implemented a toolkit for verifying bisimilarity and other properties of timed automata and labelled transition systems.• Leveraged UPPAAL model checker to add support for difference bound matrices.• Improved an algorithm for generating a zone graph from a timed automaton.
Coursework	<u>UT Austin</u> : Automated Logical Reasoning, Introduction to Mathematical Logic, Formal Verification and Semantics, Automatic Verification of Software. <u>IIT Delhi (graduate courses only)</u> : Compiler Design, Theory of Computation.
Technical Skills	<u>Programming languages</u> : Functional languages (OCaml, SML), logic programming languages (Prolog), hardware description languages (VHDL). <u>Operating systems</u> : GNU/Linux (application development and kernel development). <u>Compiler frameworks</u> : Soot (Java), LLVM (C++). <u>Others</u> : Xilinx, Matlab, PostgreSQL.
Scholastic Achievements	<ul style="list-style-type: none">• Awarded the UT Austin Graduate School's Recruitment Fellowship. (2014-2017)• Secured All India Rank 138 in the Joint Entrance Examination (IIT-JEE) among 400000 candidates. (2009)

- Secured All India Rank 29 in the All India Engineering Entrance Examination (AIEEE) among 1000000 candidates. (2009)
- Scored 99 percentile in Verbal and Analytical Reasoning, GRE. (2012)

Others

Languages: English, French, Gujarati, Hindi.