Siddhartha Prasad

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EDUCATION
Tufts University, Medford MA
Bachelor of Science in Computer Science and Mathematics, May 2016
GPA: 3.86 | Dean's List 4/4 Semesters

RELEVANT COURSEWORK
Computation Theory, Operating Systems, Algorithms, Programming Languages, Machine Structure & Assembly Language Programming, Data Structures, Web Programming, Abstract Algebra, Abstract Linear Algebra, Probability and Stochastic Processes, Discrete Math, Multivariable Calculus, Electrical Systems, Digital Electronics, Electronics, Music & the Art of Engineering.

WORK EXPERIENCE

Team Parsifal, INRIA Saclay | Palaiseau, France | June – July 2014
Intern
- Designed and implemented the first type-generic verification system for first order equational logic.
- Researched rewrite certificates and verification of term re-writing and theorem proving systems under the *Proofcert* grant.

Tufts University Computer Science Department | Medford, MA | Jan 2014 – *Present*
Teaching Assistant for Algorithms *and* Data Structures *courses*
- Reinforce concepts for students during office hours and labs.
- Grade assignments for over 130 students

Graphics and Vision Lab, I.I.T. Delhi | New Delhi, India | Jun - Aug 2013
Intern
- Implemented an in-painting system for greyscale images that carries out predictive image restoration under the grant *Acquisition, Representation, Processing and Display of Heritage Sites*.
- Created a modified version of standard in-painting algorithms, using partial differential equations.

Gram Vaani | New Delhi, India | May – June 2011
Intern
- Wrote a program to analyze the Municipal Corporation of Delhi's call logs and identify patterns and trends.
- Code has helped civic agencies understand how IT automation can reveal insights to help improve their performance.

PROJECTS
- *checkpc***:** Designed and implemented *checkpc*, the first type-generic rewrite verification system. It can reconstruct rewrite proofs and verify rewrite and equality checking systems.
- *rwthree***:** Designed and implemented verifiable term equality checking and rewrite system.
- *Inpainting*: Implemented a greyscale image *in-painting* system that can predict and fill in 'holes' in images.
- *Fuelmeup:* Built a web-app that finds the cheapest gas around you, compensating for driving fuel costs.
- *Universal Machine*: Implemented (in C) a 14 instruction universal machine emulator, and macro-assembler for the machine.
- *Compressor:* Designed and built an analog signal compressor for a ⅛" mono audio input.

SKILLS

Programming and Markup Languages: Prolog, C, Java, C++, JavaScript, Ocaml, ML, Scheme, Bash, LaTeX, HTML, CSS.
Software Tools: Scilab, Matlab, Valgrind, Callgrind Profiler, GNU DDD, Git, MongoDB, Vim, Eclipse, Emacs, BlueJ, ModelSim VHDL.

ACTIVITIES

- Member, Tau Beta Pi Honors Society
- Tufts University Small Jazz Ensemble
- Mentor, Tufts University Engineering Mentors
- Member *International Gateway for Gifted Youth* run by the University of Warwick. Took courses on *Shakespeare, Performance and Myth* and *Creative Writing and Comparative Culture*.
- Member, Inspire Program, Govt. of India (for the top 1% of science students in India).