Siddhant Sunilkumar Mutha

CS11B048

Education

- **Indian Institute of Technology Madras** — Chennai, India
  BTech./MTech. in Computer Science and Engineering; **CGPA:** 7.84/10 — Aug. 2011 – Present
  - Major: **Computer Science and Engineering**; Minor: **Micro Electronics**
- **Deogiri Junior College** — Aurangabad, India
  Class XII; **Total:** 83.66% — 2010
- **Nath Valley School** — Aurangabad, India
  Class X; **Total:** 91.20% — 2008

Coursework

- **System Design Courses:**
  - Software Defined Networking
  - Computer Architecture
  - Program Analysis
  - Concurrent Programming
- **ML and CV Courses:**
  - Kernel Methods for Pattern Analysis
  - Pattern Recognition
  - Computer Vision
  - Digital Video Processing

- **Core Courses:**
  - Computer Networks
  - Computer System Design
  - Compiler Design
  - Operating Systems
  - Computer Organization
  - Data Structures and Algorithms
  - Introduction to Database Systems
  - Languages, Machines and Computations

Projects

- **SDC** — IIT Madras
  Dual Degree Project — 2015 – 16
  - SDC[1] is an open source compiler for the D language.
  - Contributing to it by implementing interface handling in the language.

- **LLC Optimisation** — Bangalore, India
  Intel Technology India Private Limited — May – July, 2014
  - Analyzed and studied dumps of the Last Level Cache (LLC) from several benchmarks.
  - Used the statistics obtained along with other ideas to develop and simulate feasible models for the LLC.

- **Automatic tracking of object silhouette under camera movement** — IIT Madras
  Project under Dr. Sukhendu Das — Jan – May, 2015
  - We track an object in motion in a situation where the camera may also be moving, using unsupervised methods.
  - This is done using sparse segmentation of point trajectories followed by the application of graph cut algorithm.

- **Link Plus Plus** — IIT Madras
  Google Developers GeekUp Hackathon — October, 2014
  - Developed a Chrome extension to share links with higlighting in webpages using a Google App Engine backend.

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[1]Stupid D Compiler [https://github.com/deadalnix/SDC]

- **Automatic Guitar Transcription**   IIT Madras
  Project under Dr. Sukhendu Das   Jan – May, 2014
  - A Computer Vision based system which transcribes the tablatures from a video showing musicians playing a guitar.

- **Parallel Algorithm for Triangle Counting**   IIT Madras
  Project under Dr. Shankar Balachandran   Jan – May, 2014
  - Parallel Algorithm for Triangle Counting in an undirected graph and using it to find clustering coefficient of a known dataset.

- **Note It**   IIT Madras
  Microsoft code.fun.do Hackathon   January, 2014
  - Developed a Windows Phone app which allows one to type notes while it records audio in the background.
  - This audio can later be seeked by tapping on a particular word in the saved notes.

- **Minijava to MIPS Compiler**   IIT Madras
  Project under Dr. Krishna Nandivada   Aug – Dec, 2013
  - Developed a compiler for Minijava (a subset of Java) to MIPS.
  - Implemented lexical analysis, typechecking of MiniJava programs and conversion to machine-level code.

- **Gamification Rule Engine**   Pune, India
  Siminars, Inc.   May – July, 2013
  - Built a rule engine for the implementation of gamification on siminars.com

- **CloudXCloud**   IIT Madras
  Yahoo! HackU 2013   March, 2013
  - Developed a GUI application for managing Google Drive and Dropbox accounts simultaneously.
  - The application also allowed for transferring of files amongst the two services.

Achievements & Awards

- **Yahoo! HackU 2012:** Special Mention Prize
- **IIT JEE 2011:** All India Rank 342

Skills

- **Languages:** C/C++, Python, Java, D, Cilk Plus, Matlab, HTML, CSS, JavaScript
- **Operating Systems:** GNU/Linux, Windows
- **Software Development:** Android
- **Tools:** Emacs, Git
- **Others:** LLVM, Tornado, Pthreads, Google App Engine

Co-curricular Activities

- **Coordinator, Hackfest, Shaastra 2013[2]:** Organized a FOSS workshop involving four projects (KDE, Tor, Mediawiki and GNU Mailman) for 50 participants, mentored by people who had done GSoC[3] in the respective projects.

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[2]Shaastra is IIT Madras' student-run technical festival
[3]Google Summer of Code