SIDDHANT MANOCHA

Third Year Undergraduate
Department of Computer Science and Engineering
Indian Institute of Technology, Kanpur

Phone No.:+91-7752894588
Email: siddhantmanocha1994@gmail.com
Homepage:home.iitk.ac.in/~smanocha

EDUCATIONAL QUALIFICATIONS

- **Indian Institute of Technology, Kanpur, India**   **CGPA: 9.9/10.0**
  B.Tech, Computer Science and Engineering, 2012 - Present

- Lawrence and Mayo Public School, Kota, India   Percentage : 96.2 %
  Senior School Certificate(CBSE), 2012

- St.Thomas College, Lucknow, India   Percentage : 95.8 %
  Secondary School Certificate(ICSE), 2010

ACADEMIC ACHIEVEMENTS

- Ranked in **top 7 students in the institute** among 837 students

- Secured **All India Rank 100** in IIT-JEE 2012 among 0.5 million candidates

- Placed in **top 0.05%** (amongst over 1 million students) in AIEEE 2012 with AIR 148

- Awarded **Academic Excellence Award** (given to top 5% students) for exceptional academic performance in 2012-13

- Received **Summer Undergraduate Research Grant for Excellence** (SURGE) 2014,granted by Dean, Resource Planning and Generation, IIT Kanpur.

- Selected for Kishore Vigyan Protsahan Yojna (**KVPY**), 2012 given by Department of Science and Technology, Government of India

- Awarded **Certificate of Appreciation by the Director, IIT Kanpur** for outstanding contribution in software development in Inter IIT Technical Meet held at IIT Bombay

- Amongst top **1% students** in NSEA, pre-final round in Indian National Astronomy Olympiad 2011-2012

WORK EXPERIENCE

Vision Based Robot Motion Planning   *SURGE | May 2014-July 2014*
Mentor: Dr .Amitabha Mukerjee, Department of Computer Science and Engineering, IIT Kanpur

- Formulated an algorithm to automate the motion and plan the trajectory of CRS Robotic arm using computer vision, image processing and Gaussian models

- Implemented Gaussian Process Latent variable model and Gaussian process regression to figure out the mapping between joint angles of the robotic arm and corresponding images for various configurations for trajectory planning

- Recovered the joint angles of the robotic arm from the corresponding images with about **99.5% accuracy** and generated a smooth trajectory between unknown robot configurations with solution sufficiently close to ground truth solution

Nachos   *Course Project|ongoing*
Mentor: Prof .Mainak Chaudhari, Department of Computer Science and Engineering, IIT Kanpur

- The coursework includes implementation of system calls; process management and scheduling; memory management schemes and page replacement algorithms in Nachos,an operating system simulator.

City Watch, Crowd Source Android Application   *Android Application | December 2014*

- Conceptualized a crowd source solution to address local infrastructural issues in the city and report problems to the municipal government for immediate consideration

- Developed an Android Application using web standards(HTML,CSS,JavaScript,PHP) through Intel XDK framework

- Awarded **2nd prize** in Software Development **amongst 20 teams at Inter IIT Technical Meet** held at IIT Bombay

My Impress, Cloud Based Presentation Software *Web Application | May 2014-June 2014*

- Designed an online platform to create presentations with cloud support and improved presentation transition effects
- Utilized Impress.js framework and Web standards(JavaScript,PHP,MYSQL)to construct an editing and hosting platform
- Devised a user interface for Impress.js presentations that provided a powerful tool to add 3-D scale, zoom and rotate features which distinguished them from standard PowerPoint presentations

Short Term Projects

- Comment Magic, Facebook Application *September, 2013*
  - Programmed a Facebook Application that enabled users to search for posts through their wall, their friend's timeline and user groups and allowed them to post same comment on multiple posts
  - Won **1st prize** in Web-Development event **amongst 20 teams in Takneek**, Inter Hall Technical Fest of IIT Kanpur

- Learning Wagon, Web Application *September, 2013*
  - Devised a featured English pronunciation web app that comprised of an interface for English Hindi translation with images and pronunciations of words and facilitated them to improve their pronunciation
  - Secured **2nd position** in the El Eduvate event **amongst 30 teams in Techkriti**, Annual technical festival of IIT Kanpur

- Picachu, Facebook Application *March, 2014*
  - Developed the app Picachu in Yahoo Hack-U that comprised of Google chrome plugin and facebook application to facilitate the users to edit photos (via HTML 5) online and post them directly as facebook comments

TECHNICAL SKILLS

- Programming languages: C, C ++ , Perl, Bash, HTML, JavaScript, CSS, PHP, MYSQL, Python

- Platforms/Tools: Windows, Linux, Octave, GNU Plot, Latex, Matlab, Socket Programming

RELEVANT COURSES

Data Structures and Algorithms	Computing Laboratory	Theory of Computation*
Linear Algebra	Introduction to Calculus	Fundamentals of Computing
Operating Systems*	Discrete Mathematics	Probability and Statistics
Computer Organization	Computer Networks*	Abstract Algebra

*: ongoing

POSITIONS OF RESPONSIBILITY

- **Secretary, Programming Club, IIT Kanpur** *June 2013-April 2014*
  Organized lectures at the hall level , promoted participation in programming events and mentored juniors in Summer Project

- **Academic Mentor, Counseling Service, IIT Kanpur** *April 2013-June 2014*
  Provided academic assistance to students from junior batches in Fundamentals of Computing (ESC 101)

EXTRA-CURRICULAR

- Secured **2nd position** in BattleCity, an AI strategy game event, **amongst 23 teams** held at Techkriti(2014), annual technical festival of IIT Kanpur

- Awarded Certificate of Appreciation for outstanding project as a part of Manufacturing Process course for fabricating Mechanical Odometer