

INTERNSHIP APPLICATION FORM

1 Basic Data

Last name: Manocha
First name: Siddhant
Middle name(s):
Date of birth (dd/mm/yy): 17/04/1994
Nationality: India
Gender: Male
Civil status: Single
Contact address: G 209 /5 , IIT Kanpur,Kanpur -208016
Email: smanocha@iitk.ac.in
Homepage (if any): home.iitk.ac.in/~smanocha
Name of institute: IIT Kanpur
Area of study: Computer Science and Engineering
Start date of study: 22-07-2012
Expected graduation date: 28-04-2016
Language(s): English , Hindi
CGPA at the end of 4th/6th semester: 9.9/10.0 (after 4 semesters)

2 Areas of interest

Please provide up to three general areas of interest and up to three specific EPFL laboratories and professors which you would prefer for your internship. All research groups and research staff are listed on the websites of the different schools under www.epfl.ch.

Areas of interest: (max. 100 characters)	Machine Learning and Computer Vision Operating Systems
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Preferred EPFL laboratories	Abbreviation of lab/research group	Preferred researcher of this lab/research group		
		Title (Prof./Dr.)	Initial(s)	Last name
1)	Human Computer Interaction Group	Dr.	Pearl	Pu
2)	Computer Vision	Prof.	Pascal	Fua
3)	Operating Systems	Prof.	Willy	Zwaenepoel

Additional remarks:

The projects offered at the labs involve pioneering research work in Machine Learning and Operating Systems and since it aligns with my research interest, I am highly passionate about it. I aim to gain valuable research experience and knowledge which would broaden my perspective on research and choose an area of research for my graduate studies.

3 Educational qualifications

Academic institution (name, city, country)	Period (in years)	Degree(s) obtained	Areas of study	Grades
IIT Kanpur	2012-Present	Bachelors of Technology	Computer Science	9.9/10/0
Lawrence and Mayo Public School	2012	AISSCE(XII th)	Physics, Chemistry, Maths, English	96.2%
St. Thomas College	2010	ICSE(X th)	Science, English, Maths, Computer Applications	95.6%

4 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

5 Projects and 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 com-

puter 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.

City Watch, Crowd Source Android Application

Android

Application | December 2013

– Conceptualized a crowd source solution to address local infrastructural issues in the city and report prob-

lems to the municipal government for immediate consideration

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

framework

My Impress, Cloud Based Presentation Software

Web

Application | May 2013-June 2013

– Designed an online platform to create presentations with cloud support and improved presentation tran-

sition 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

6 Achievements and awards

- Ranked in top 6 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

7 Publications (if any)

8 Extra Curriculum Activities

- Awarded 2nd prize in Software Development amongst 20 teams at Inter IIT Technical Meet held at IIT Bombay
- Secured 2nd position in Battle City, an AI strategy game event, amongst 23 teams held at Techkriti(2014), annual technical festival of IIT Kanpur
- Secured 2nd position in the El Eduvate event amongst 30 teams in Techkriti, Annual technical festival of IIT Kanpur
- Scripted and acted in radio play in Spectrum'13, annual Films and Media festival of IIT Kanpur
- Performed in street play in Galaxy'13, annual Cultural festival of IIT Kanpur

9 For 4th year dual-degree students only

Is the EPFL internship meant to constitute the first part of a subsequent MTech project work?

Yes No

If yes, please provide the contact details of your prospective MTech guide to be contacted by EPFL faculty:

Name:	
E-mail:	

10 References

Dr.Amitabha Mukerjee:

Professor, Department of Computer Science and Engineering, IIT Kanpur.

Phone: +91-512-259-7489

Email:amit@cse.iitk.ac.in

Dr.Amey Karkare:

Assistant Professor, Department of Computer Science and Engineering, IIT Kanpur.

Phone: +91-512-259-7520

Email:karkare@cse.iitk.ac.in

I certify that my statements in answer to the foregoing questions are true, complete and correct to the best of my knowledge and belief.

Name: Siddhant Manocha	Date: 10 October , 2014
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