

**Department of Information Technology  
ACM Student Chapter  
organizes**

**Summer Workshop cum Internship**  
on  
**Computational Techniques for Social Good**

**1st June - 25th July  
2021**

**Phase-I: Workshop:** 1st June - 12th June, starting two weeks will be devoted to learning computational techniques. Topics would be introduced through pre-recorded video lectures, and activities (programming tasks) would be assigned. Students are expected to watch the lectures and perform the activities. Doubt session would be organized on need basis. For topic details, refer to Appendix-A.

**Phase-II: Internship:** 14th June - 25th July, on successful completion of activities in Phase-I, projects will be assigned to student teams. The projects would be around the broad theme of social good. Refer Appendix-B for some ideas about the projects.

**Registration Fee:**

A refundable registration fee of Rs 1000/- (One Thousand only) from each participant (IGDTUW and outside) shall be charged, to be paid in online mode to account details below, deadline: 31st May, 2021. 50% discount for ACM student members.

A/C Name: ACM IGDTUW  
A/C Number: 09001000018964  
Bank: Punjab and Sind Bank,  
GGSIPU University, Delhi - 110006.  
IFSC Code: PSIB0001098

Registration fee shall be refunded to the participants after successfully completing the activities and project as per Phase-I and Phase-II, respectively, otherwise the collected fee won't be refunded.

**Registration Form:** After paying the fee, please make sure to submit your details and secure your participation in the programme. <https://forms.gle/z7YvHyWQdjRUCTNFA>

**Who can attend?** Open to students from all programmes, all years, and all disciplines.

**Certificate** shall be issued at the end of workshop-cum-internship to all participants which shall be valid for receiving the requisite credits for summer/industry internship as per University norms.

**Project Development:** Projects would be research oriented, after successfully completing, students will get support for registration fee from University to present their work in conferences as per University norms. Also, if the work is worthy for submission to a Journal, then after acceptance, students will get a cash award from University as per University norms.

#### Annexure-A

Topic	Day
Workshop Introduction and Python and Data Structures	1
Data Preprocessing & Visualizations	2
Introduction to Machine Learning & Linear Regression	3
Classification Algorithms - Decision Tree, Naive Bayes, KNN, SVM	4
(Semi and) Unsupervised Learning	5
Logistic Regression, Neural Networks, Deep NN	6
Convolutional Neural Networks	7
Recurrent Neural Networks	8
Network Science & Graph Representation Learning	9
Optimization Techniques & Explainability of Machine Learning	10

#### Annexure-B

Computing for social good means many different things for different people. Refer to some of the groups/labs around the world for some ideas of what it means. Your project ideas would be broadly on similar themes.

<https://precog.iiitd.edu.in/>

<http://midas.iiitd.edu.in/>

<https://www.hcii.cmu.edu/research/social-computing-lab>

<https://ischool.illinois.edu/research/areas/computing-social-good>

<https://bdsc.lab.uic.edu/projects.html>

<https://www.datascienceforsocialgood.org/>

<https://www.turing.ac.uk/collaborate-turing/data-science-social-good>