Teaching Assistantship - Annual Progress Report (May 2021-April 2022)

Indian Institute of Technology (IIT), Ropar, India

Department of Computer Science & Engineering

Jan 2021

Teaching Assistant, *Introduction to Computing & Data Structures*, (GE-103)
(Jan 2021 - June 2021)

Course Instructor: Dr. Mukesh Saini & Dr. Sudeepta Mishra

Responsibilities: (8hr/week)
- Lab/Doubt sessions, Preparation to evaluation (+viva-voce) of tutorial set, and lab assignments.

Aug 2021

Teaching Assistant, *Data Mining*, (CS-524)
(Aug 2021 - Dec 2021)

Course Instructor: Dr. Shweta Jain

Responsibilities: (8hr/week)
- Preparing & evaluating lab assignments, Conducting term paper presentations, lab/doubt sessions.

Jan 2022

Teaching Assistant, *Introduction to Game Theory & Mechanism Design*, (CS-535)
(Jan 2022 - June 2022)

Course Instructor: Dr. Shweta Jain

Responsibilities: (8hr/week)
- Preparing & evaluating practice problem sets, Conducting doubt sessions, Evaluation of quizzes.

Guru Nanak Dev Engineering College, Ludhiana, Punjab, India

Department of Computer Science & Engineering (https://www.gndec.ac.in/)

– An Autonomous College under UGC Act & Punjab Government Aided

Feb 2022

Guest Lecturer, *Introduction to Python & Machine Learning (Feb 22 - Present)*
Duration: 1 hour per week
Current Progress: Completed upto 13 weeks (as on 27/05/2022).
Course Layout:

Week	Topic	Description
1	Introduction to programming	Program, Need for it, Programming languages, Complier, Interpreter, Running of program, Difference between different languages (C, C++, Java, Python)
2	Python setup, Basic Syntax	Windows, Linux, MacOS setup, PATH variable, Virtual Environment, IDEs, Jupyter
3	Variables, Datatypes & Comments	Lecture along with practical hands on.
4	Operators & Precedence	Lecture along with practical hands on.
5	Data Structures in Python	List, Tuple, Sets, Dictionary and their in-built function
6	Decision making (If , elseif , else)	Lecture along with practical hands on.
7	Loops (for & while loop)	Lecture along with practical hands on different questions
8	Nested Loops & Patterns	Lecture along with practical hands on.
9	Functions	Syntax, examples & working of functions, Pass by value v/s Pass by reference
10	Lambda func., Intro. to OOPs	Classes, Objects, Abstraction, Encapsulation
11	UML & Constructors in Classes	Class & Object diagram, Default, Parameterized Constructors, and hands on coding examples
12	Inheritance & its types	Lecture along with practical hands on examples.
13	Polymorphism	Lecture along with practical hands on examples.
14	Introduction to threading	Lecture along with practical hands on.
15	Introduction to Machine Learning	Lecture
16	Supervised Learning	Lecture
17	Linear Regression	Lecture
18	Linear Regression	Lab
19	Linear Classification	Lecture
20	Linear Classification	Lab
21	Decision Trees & Forests	Lecture
22	Decision Trees & Forests	Lab
23	Unsupervised Learning	Lecture
24	Unfair & Fair Clustering	Lecture