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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : Design and Analysis of Algorithms (Computer Science and Engineering)**

**Co-ordinators : Prof. Sundar Viswanathan, Prof. Ajit A Diwan, Prof. Abhiram G Ranade**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : NOC:Design and Pedagogy of the Introductory Programming Course (Computer Science and Engineering)**

**Co-ordinators : Prof. Abhiram G Ranade**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : NOC:An Introduction to Programming through C++ (Computer Science and Engineering)**

**Co-ordinators : Prof. Abhiram G Ranade**

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**Co-ordinators : Prof. Varsha Apte**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : NOC:Computer Networks and Internet Protocol (Computer Science and Engineering)**

**Co-ordinators : Prof. Sandip Chakraborty, Prof. Soumya Kanti Ghosh**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : Theory of Automata, Formal Languages and Computation (Computer Science and Engineering)**

**Co-ordinators : Prof. Kamala Krithivasan**

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**Co-ordinators : Prof. Hema A Murthy, Prof. Shankar Balachandran, Dr. N.S. Narayanaswamy**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

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**Co-ordinators : Prof. Madhavan Mukund**

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Lecture 2 - Lecture 2 - Improving naive gcd

Lecture 3 - Lecture 3 - Euclid's algorithm for gcd

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Lecture 7 - Tutorial 2 - Part 1 Facebook API

Lecture 8 - Tutorial 2 - Part 2 Facebook API

Lecture 9 - Trust and Credibility on OSM

Lecture 10 - Misinformation on Social Media

Lecture 11 - Privacy and Social Media

Lecture 12 - Tutorial 3 - Part 1 Twitter API

Lecture 13 - Tutorial 3 - Part 2 MySQL

Lecture 14 - Tutorial 3 - Part 3 MongoDB

Lecture 15 - Privacy and Pictures on Online Social Media

Lecture 16 - Policing and Online Social Media

Lecture 17 - Policing and Online Social Media

Lecture 18 - Policing and Online Social Media

Lecture 19 - eCrime on Online Social Media

Lecture 20 - eCrime on Online Social Media

Lecture 21 - Tutorial 4 - Social Network Analysis

Lecture 22 - Link Farming in Online Social Media

Lecture 23 - Nudges

Lecture 24 - Semantic attacks: Spear phishing

Lecture 25 - Tutorial 5 - Analyzing text using Python NLTK

Lecture 26 - Profile Linking on Online Social Media

Lecture 27 - Anonymous Networks

Lecture 28 - Tutorial 6 - Gephi Network Visualization

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[Lecture 33 - On the dynamics of username change behavior on Twitter](#)

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Lecture 2 - Java : Primitive Data Types, Strings, Loops, Conditional Statements

Lecture 3 - Java : Strings, OOP principles

Lecture 4 - Java : Interfaces

Lecture 5 - Java : Classes, Exceptions, Threads

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Lecture 7 - Your First App

Lecture 8 - Deploying your App to a Phone

Lecture 9 - Extending app - Buttons, Toast

Lecture 10 - Android Development Environment

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Lecture 15 - Activity Lifecycle - II

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Lecture 5 - Practical - Running your own web-server

Lecture 6 - Protocols

Lecture 7 - Practical - SSH + Network experiments

Lecture 8 - Practical - Building a webapp with nodejs and using git. Introduction to reverse proxies.

Lecture 9 - Practical - Introduction to server-side javascript and HTML/CSS

Lecture 10 - Introduction to client-side Javascript

Lecture 11 - Practical - APIs and mobile apps use web-servers

Lecture 12 - Introduction to databases

Lecture 13 - Data modelling and constraints

Lecture 14 - Interacting with a DBMS

Lecture 15 - Practical - Deeper exploration of a DBMS (column types and more)

Lecture 16 - Introduction to SQL

Lecture 17 - Understanding database performance

Lecture 18 - Transactions and ACID properties

Lecture 19 - Database security, backup and recovery

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Lecture 21 - Scaling a database

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Lecture 23 - SQL and NoSQL systems

Lecture 24 - Authentication with HTTP

Lecture 25 - Understanding security, and some best practices for webapps

Lecture 26 - Introduction to authentication, hashing, curl and sessions

Lecture 27 - Introduction to mobile apps

Lecture 28 - Introduction to Mobile Application Development Part 2

Lecture 29 - Introduction to Android

Lecture 30 - Getting started with Android Application Development

Lecture 31 - Building Custom UI using XML and Logs



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[Lecture 36 - Version Control using Git](#)

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Lecture 4 - OS Security Issues

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Lecture 7 - Scheduling Algorithm

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Lecture 9 - Memory Management - 1

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Lecture 12 - File Systems - 2

Lecture 13 - Unix Filesystem

Lecture 14 - Unix Filesystem (Continued...)

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Lecture 16 - Linux: Basic Commands (Continued...)

Lecture 17 - Linux: Users and Permissions

Lecture 18 - Linux: I/O Redirection and Pipes

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Lecture 20 - Linux: Shell Environment

Lecture 21 - Linux: Text Editors

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Lecture 28 - Shell Comments and Variables

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Lecture 3 - CSP Examples: Huffman-Clowes Labelling, Waltz Algorithm, Crosswords

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Lecture 5 - Constraint Networks - An Introduction

Lecture 6 - Binary Constraint Networks (BCN), Equivalent Networks

Lecture 7 - Projection Networks

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Lecture 10 - Can we do better than AC3?

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Lecture 8 - Programming using X86 ISA - Addressing Modes

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**Co-ordinators : Prof. Ponnurangam Kumaraguru**

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**Co-ordinators : Prof. Ganapathy, Prof. Balaji Srinivasan**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : NOC:Machine Learning (Computer Science and Engineering)**

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# DIGIMAT - The No.1 Autonomous Learning Platform for Creative Learning

**NPTEL : NOC:Applied Accelerated Artificial Intelligence (Computer Science and Engineering)**

**Co-ordinators : Prof. Satyadhyan Chickerur, Prof. Bharatkumar Sharma, Prof. Adesuyi Tosin, Prof. Satyajit Das**

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Co-ordinators : Multi-Faculty

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