

Seminar 2: Software and systems

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Outline

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Software and Systems at Liu

General

- Lisam, TimeEdit, Teams, Zoom, ...
- IT support at Liu
- Remote login
- LiU-ID and LiU-card

Specific

- R, Rstudio...

TimeEdit

- Timetable for courses.
- <https://cloud.timeedit.net/liu/web/schema/>
 - ▶ choose English
- Search for:
 - ▶ Courses
 - ▶ Rooms
 - ▶ Teacher, student groups, teaching activity
- When you have a schedule:
 - ▶ Subscribe to other calendar apps
 - ▶ Download
- Maps: [Link to map](#)
 - ▶ try to find: SU10, A2, S10, KEY1

Lisam

What is LISAM?

- learning platform
- Email, calendar, OneDrive, Office online, and more...
- **Course room** → one for each course
- [Lisam](#)
- More information: [Lisam info](#)

Lisam: starting page

The screenshot shows a web browser window displaying the Lisam starting page. The browser's address bar shows the URL: `liuonline.sharepoint.com/sites/Lisam/SitePages/en/home.aspx`. The page has a blue header with the 'liu' logo and 'SharePoint' text. Below the header, there is a navigation bar with 'Start / Lisam' and a search bar. The main content area features a light blue banner for 'Registration for the fall semester 2024'. Below this, there are two sections: 'Courses and programs' and 'Upcoming for you'. The 'Courses and programs' section lists various courses with their titles and campus locations. The 'Upcoming for you' section shows a message that the user currently has no courses to register for.

liuonline.sharepoint.com/sites/Lisam/SitePages/en/home.aspx

liu SharePoint

Sök på flera webbplatser

Start / Lisam

Kurser och program

Engelska

Registration for the fall semester 2024

You need to register for your courses in the beginning of each semester. If you scroll down, below the news feed, you will find a link to Ladok where you register for courses. If you do not register within a week, you can no longer access your course room. [Here you can find when registration is available for your faculty](#) and remember that the sooner you register the better. Are you a new student? [Take a look at our short introduction to Lisam.](#)

Courses and programs

Show all

FTKSA - Bachelor's Programme in Statistics and Data Analysis	
FTMSL - Masters Programme in Statistics and Machine Learning	
732G34 - Statistical Methods for Complex Data HT24, Campus Valla	
732A64 - Master Thesis in Statistics VT24, Campus Valla	
732A73 - Bayesian Learning VT24, Campus Valla, ^{SP} Joined course	
732A47 - Bachelor's Thesis in Statistics VT24, Campus Valla	
732G49 - Introductory Statistics and Data Analysis: Inference VT24, Campus Valla	
732A76 - Research Project HT23, Campus Valla	
732G34 - Statistical Methods for Complex Data HT23, Campus Valla	
732G43 - Bayesian Statistics HT23, Campus Valla	

Upcoming for you

Show all

You currently have no course to register for, exam registration or course evaluation to do.

Lisam: starting page

Log in as a student

- Courses and Programs: See all courses you are registered for
- News feed: you find comments from courses and program rooms you have chosen to follow
- About me (edit the profile) in my Microsoft 365-profile
- LISAM support
- Dots in left upper corner → apps

Lisam: Course room

- Home: course home page with news feed
- Course plan: compressed information about the course, teaching, examination and admission requirements
- Course documents: course materials → lectures, files (uploaded by teacher)
- Collaborative workspace: teachers and students can publish files there and make comments
- Members and groups
- Schedule: link to schedule
- Assessment record: The overview of your grades
- Submissions: Here you may find your labs/assignments and submit your solutions

Teams

You find it in Lisam at the Dots in left upper corner → apps

- Software for collaboration and communication
- Chat, voice and video meetings, file sharing
- Team
 - ▶ collaboration space
 - ▶ uses channels for different topics
- Used in some courses
 - ▶ can be connected to course rooms on Lisam
- Students can use it for labs and projects
 - ▶ Make sure to make it private if you are using it for mandatory assignments to avoid plagiarism

Zoom

- Software for video meeting
- Information about Zoom

Statistical and ML software

- Free of charge:
 - ▶ R
 - ▶ Python, Julia
 - ▶ Stan, WinBugs, JAGS
 - ▶ Apache Spark
- Commercial:
 - ▶ SAS
 - ▶ Minitab
 - ▶ SPSS
 - ▶ Matlab
 - ▶ Microsoft SQL Server

R programming language

- Scope: data handling, visualization, statistics, machine learning, scientific computing
- Open source and free
- High level Interpreted language
- Popular within Statistics and Machine Learning
- Functional and object oriented language
- CRAN: [The Comprehensive R Archive Network](#)

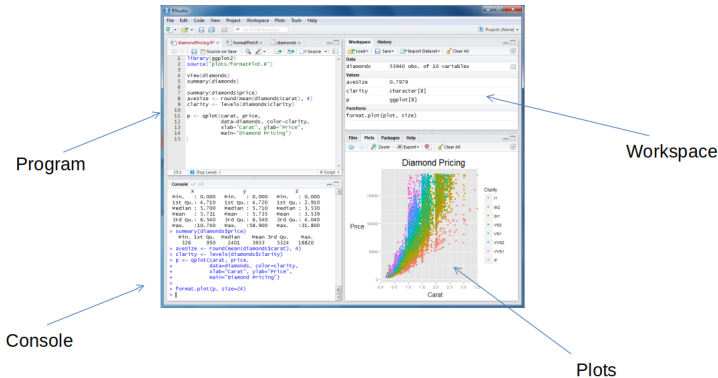
R

Installation

- See [CRAN](#) (Windows, Mac, Linux)

Rstudio

- Recommended integrated development environment (IDE) for R
- Download: [here](#)
 - ▶ choose **Download Rstudio Desktop**: Open source Edition



R demo

R-file is available at the [course home page](#).

R-packages

- CRAN
 - ▶ 21 145 available packages (as of 2024-08-26)
 - ▶ varying quality and documentation
- Github, [examples](#)

R-packages

Some examples

- Data handling:
 - ▶ [Tidyverse](#)
 - ▶ dplyr, tidyr
- Visualization → [732A98 Visualization](#)
 - ▶ ggplot2, ggmap
 - ▶ plotly, shiny
- Data:
 - ▶ readr, lubridate, stringr, pxweb
- Modeling
 - ▶ lm, glm, stan, bart, glmnet, xgboost, tensorflow, torch
- Longer list of good [packages](#)
- [Cran task views](#): example [Machine Learning & Statistical Learning](#)

More R

Course: [732A94 Advanced Programming in R](#)

Some links:

- [R for Data Science](#)
- [Advanced R](#)
- [R packages](#)

Computer labs

Computer rooms

- SU-rooms: Linux
 - ▶ Open terminal with: `Ctrl + Alt + T`
 - ▶ Load course module:
 - ★ Write `module add courses/732A94` and then press enter
 - ▶ Load R+Rstudio+packages:
 - ★ Write `module add prog/r-mega-edition/21.10` and then press enter
 - ▶ After loading a module: write `rstudio` in terminal and press enter
- PC-rooms: Windows
- Free to use when not booked
- Can be used [remotely](#)