

# Efficient Linear Algebra and Machine Learning for Computational Linguistics

**Instructor:** Dr. Daniël de Kok

**Timeslots:** Tue 14ct-16 0.01, Thu 14ct-16 0.01

**Course webpage:** <https://elaml.danieldk.eu/>

**Course description:** This course provides a comprehensive introduction to Rust, covering everything from the basics to advanced topics. Throughout the course, we will implement, benchmark, and discuss interesting data structures and algorithms from computational linguistics, linear algebra, and machine learning to practice Rust. After successfully completing the course, you will be able to implement CL projects in Rust with an eye to efficiency.

**Schedule:** Find the exact class dates on the website. Please check the website regularly for changes in the schedule.

**Prerequisites:** Data Structures and Algorithms for CL I (CLI-BA-01), Data Structures and Algorithms for CL II (CLI-BA-04), Data Structures and Algorithms for CL III (CLI-BA-07), or equivalent.

**Requirements:** You need to bring your own notebook - with cargo and Rust installed.

**Registration:** Send an e-mail to [elaml+registration@danieldk.eu](mailto:elaml+registration@danieldk.eu) before April 21 with: your name; your student number; and your program. Enrollment is restricted to 40.

**Class attendance:** Attendance is not mandatory, but will be monitored.

**Assignments:** There are weekly assignments. A random sample of the submissions will be graded.

**Project:** The course will be concluded by a project.

**Teams:** the weekly assignments and project must be submitted as a team of max. two persons.

**Grade:** The grade is composed of the graded weekly assignments (40%) and the project (60%).

**Plagiarism:** The solutions to the assignments should be your own work. Submissions that are not your own work are considered to be plagiarism and are handled according to the exam regulations.

## Reading material

- Programming Rust. Fast, Safe Systems Development, Jim Blandy, Jason Orendorff, O'Reilly Media, 2017. This book is accessible through the University Library. Use the link on the website from the university network or remote access.