SUMMER MACHINE

SCHOOL LEARNING

ECONOMICS BUSINESS

| COURSE DESCRIPTION

Machine learning has become a dominant paradigm for data analysis. It is used across a vast variety of fields and applied problems, and it interests academics and practitioners alike. But what is machine learning really about? What does it mean that a machine "learns"? In what sense is machine learning the basis for artificial intelligence? What problems can it solve, and where are its limits? What are the most common algorithms of the machine learning paradigm? How does it relate to classical statistics and to econometrics? In this course, we address these questions. We do so in a very hands-on way. You learn the methods of machine learning by applying them directly during the course, using your laptop and programming in R. The emphasis is on both understanding the methods and on getting a feeling how they actually work in practice.

| TARGET AUDIENCE

This **course is intended** for students from the fields of economics or business with an interest in applying machine learning either for their doctoral thesis or in practical work thereafter.
The **course requires knowledge** of the basic concepts of statistics, such as (multivariate) random variables, conditional probability, moments, maximum likelihood, the basics of multivariate OLS regression, as well as the basics of matrix algebra. For the hands-on parts of the course, you need some basic knowledge of the programming language R. You will be provided material for a "crash course" in R by June 2019.

| DATE & PLACE

17 - 20 September 2019
Johannes Gutenberg University Mainz

| APPLICATION

Please send your CV & short letter of motivation to
ipp-mainz@uni-mainz.de
until 30 April 2019.
E-mail subject: SSML2019

| FEE

The general participation fee for the summer school is 400€ and covers the sessions of the summer school. Successful applicants from JGU Mainz have to pay a registration fee of 180€ which will be fully refunded if the students participate at each session of the summer school. For students enrolled in the Graduate School of Economics, Finance, and Management (GSEFM) of the universities Frankfurt, Mainz and Darmstadt, the participation fee is 180€. You will receive all payment details by mail.

| LECTURER

Prof. Dr. Johannes Binswanger
University of St. Gallen
Switzerland

Interdisciplinary **Public Policy** Mainz

IPP

JGU

JOHANNES GUTENBERG UNIVERSITÄT MAINZ