

Intelligent Systems

Excercise 1- Organisation

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University of Kiel, Winter Term 2019

1. Intelligent Systems Group
2. Exercise Organisation
3. Python introduction and installation

Intelligent Systems Group

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Courses in Winter Term 2019:

- Intelligent Systems
- Computational Intelligence
- Bachelor Seminar "Selbst-organisierte Systeme"
- Master Seminar "Deep Learning" (together with Koch/Nowotka)

Intern:

- Prof. Dr.-Ing. Sven Tomforde
- Claudia Seewald (secretary)
- Simon Reichhuber, M. Sc. (research assistant)
- NN (research assistant)
- Torge Storm (lab engineer)

Extern:

- Ghassan Al-Falouji (external PhD student, OTH Regensburg)
- Michael Meyer (external PhD student, Astyx GmbH)
- Martin Goller (external PhD student, freelancer)
- Ferdinand von Tüllenburg (external PhD student, Salzburg Research)

- Signature Task
- Teams of 2-4 members (preferably 3)
- **Start:** 5th of November 19
- **Ongoing Group Challenges per exercise**
- **Final System Presentation: tba**
- Assign your membership on the list until 5th of November 19

Exercise Organisation

- Which language?
- **Tuesday, 14:15 - 15:45**, LMS2 - R.Ü3
- Exercise slides online **Wednesday, 10:00**
- Presentation and discussion about own solutions
- Preliminary discussion of the next exercise sheet
- No submission required!
- Questions are very welcome!
 - especially during exercise or via OpenOLAT

Exercise 1	Organisation & Python Intro	✓	29.10.2019
Exercise 2	Design / Signature Task I		05.11.2019
Exercise 3	Design II / Signature Task II		12.11.2019
Exercise 4	Preprocessing / Signature Task III		19.11.2019
Exercise 5	Representation		26.11.2019
Exercise 6	Similarities		03.12.2019
Exercise 7	Segmentation / Clustering		10.12.2019
Exercise 8	Classification / Anomaly Detection		17.12.2019
Exercise 9	Evaluation / Order		07.01.2020
Exercise 10	Quantification		14.01.2020
Exercise 11	Modelling		21.01.2020
Exercise 12	Learning/ Mutual Influences / Opt.		28.01.2020

Table 1: Exercise schedule

Python introduction and installation

- High-level programming language
- object-oriented
- Features simple syntax and readability
- Dynamically, inheritance, strong typing
- Large number of libraries available

Anaconda

- Anaconda is a distribution for Python (and R)
- Roughly spoken, a package management tool
- Helps to manage various python environments **Jupyter Notebook** →
 - Easy coding and kernel availability within a browser
 - Python code can be enriched with
 - Normal (possibly marked-up) text
 - Mathematical formula
 - Other types of media (like pictures)
- Will be installed through Anaconda installation

1. Install Anaconda, according to the file *Install_Anaconda.pdf*:
2. Download also the file *PythonTutorial.ipynb* from OpenOlat
3. Run a jupyter notebook either with
 - » jupyter notebook (im heruntergeladenen Verzeichnis) or with
 - » anaconda-navigator (-> Launch Jupyter Notebook)

