Dr. Matthias Carl Laupichler Pl_anwesend_2025 () Erfasste Fragebögen = 4



| | Auswertungsteil | der geschlosser | nen Fragen | | | |
|---|---|---------------------|---------------------|-------------|----------------|--|
| egende | | | | | | |
| - | Relative Häufigkeiten der Antworten | _ \ | Median 0% 0% 25% | | n- | Anzahl |
| ragetext | Linker Pol | | | Rechter Pol | mv mc s= | <pre>>Mittelwert =Median StdAbw. =Enthaltung</pre> |
| | Skala | 1 2 3 | 3 4 5 Histogramm | | | |
| | | | | | | |
| 1. Questions about the | e course (1) | | | | | |
| ¹⁾ The difficulty of the lea | cture part of the course (i.e., theoretic | cal input by instru | ctors) is | | | |
| | | Far too low | | | 0% | n=4 |
| | ŀ | A little too low | | | 0% | |
| | | Just right | | | 50% | |
| | А | little too high | | | 50% | |
| | | Far too high | | | 0% | |
| ^{.2)} The difficulty of the ex | kercise part of the course (e.g. progra | amming exercises | s in python) is… | | | |
| | | Far too low | | | 0% | n=4 |
| | ŀ | A little too low | | | 25% | |
| | | Just right | | | 0% | |
| | A | little too high | | | 75% | |
| | | Far too high | | | 0% | |
| ^{.3)} The pace of the cours | se is | | | | | |
| | | Far too slow | | | 0% | n=4 |
| | А | little too slow | | | 0% | |
| | | Just right | | | 100% | |
| | | A little too fast | | | 0% | |
| | | Way too fast | | | 0% | |
| ^{.4)} Overall, I give the cou | urse the following school grade: | | | | | |
| | "Ungenügend" / Unsa | atisfactory (6) | | | 0% | n=4 |
| | "Mangelhaft" / | Deficient (5) | | | 0% | |
| | "Ausreichend" / | Sufficient (4) | | | 0% | |
| | "Befriedigend" / Sa | | | | 0% | |
| | | ut" / Good (2) | | | 25% | |
| | "Sehr gut" / \ | (am) manual (4) | | | 75% | |

| 1.5) | Overall, I give the lecture part of the course (i.e., the | oretical input by in | nstructors |) the follow | ing scho | ol grade | : | |
|-------------|--|---------------------------|------------|-----------------------|-----------|----------------------|-----------------------------|----------------------------------|
| | "Ungenügenc | d" / Unsatisfactory (6) | | | | | 0% | n=4 |
| | "Mang | gelhaft" / Deficient (5) | | | | | 0% | |
| | "Ausreio | chend" / Sufficient (4) | | | | | 0% | |
| | "Befriedige | end" / Satisfactory (3) | | | | | 0% | |
| | | "Gut" / Good (2) (| | | | | 50% | |
| | "Seh | ır gut" / Very good (1) (| | | | | 50% | |
| | | | | | | | | |
| 1.6) | Overall, I give the exercise part of the course (e.g., p | programming exer | cises in p | ython) the | following | g school | grade: | |
| | "Ungenügenc | d" / Unsatisfactory (6) | | | | | 0% | n=4 |
| | "Mang | gelhaft" / Deficient (5) | | | | | 0% | |
| | "Ausreio | chend" / Sufficient (4) | | | | | 0% | |
| | "Befriedige | end" / Satisfactory (3) | | | | | 0% | |
| | | "Gut" / Good (2) (| | | | | 50% | |
| | "Seh | ır gut" / Very good (1) (| | | | | 50% | |
| | | | | | | | | |
| 1.7) | The course is useful for supervising my research group. | Do not agree at all | 0% | 0% 25% 2 3 | 0% | 75% | Fully agree | n=4 mw=4,5 md=5 s=1 |
| — — 1.8) | The amount of examples in the course was appropriate. | Do not agree at all | 0% | 2 3 | 25% | 75% 1 5 | Fully agree | n=4 mw=4,8 md=5 s=0,5 |
| 1.9) | Would you have preferred a greater proportion of theoretical input or a greater proportion of practical exercises? If you think that the ratio of theory and practice was good, please check a box in the middle of the scale. | More theoretical input | 0% 0% 25% | 6 25% 0% 25% 4 5 6 | 0% 0% 0% | | More practical exercises | n=4 mw=6 md=5 s=3,6 |
| 2. | Evaluation of Learning Objectives | | | | | | | |
| 2.1) | Python programming (in general): My skills in this area <i>before</i> starting the course were | Very low | 25% | 25% 50% | 0% | 0% | Very high | n=4 mw=2,3 md=2,5 s=1 |
| 2.2) | Python programming (in general): My skills in this area are <i>now</i> | Very low | 0% | 25% 50% | 25% | 0% | Very high | n=4 mw=3 md=3 s=0,8 |
| 2.3) | I can use the Linux terminal/console. My skills in this area <i>before</i> starting the course were | Very low | 0% | | 0% | 0% | Very high | n=4 mw=2,5 md=2,5 s=0,6 |
| 2.4) | I can use the Linux terminal/console. My skills in this area are <i>now</i> | Very low | 0% | 25% 50% | 25% | 0% | Very high | n=4 mw=3 md=3 s=0,8 |
| 2.5) | I can explain gradient descent techniques. My skills in this area <i>before</i> starting the course were | Very low | 50% | 2 3 | 25% | 0% | Very high | n=4 mw=2,3 md=2 s=1,5 |
| | | | | | | | | |

| | | | <u> </u> | |
|--|----------|--|-----------|----------------------------------|
| ^{2.6)} I can explain gradient descent techniques. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,8 md=3,5 s=1 |
| ^{1.77} I can calculate descriptive statistics like mean, variance, and distribution in Python. My skills in this area <i>before</i> starting the course were | Very low | 25% 0% 50% 25% 0% 1 2 3 4 5 | Very high | n=4 mw=2,8 md=3 s=1,3 |
| ^{.8)} I can calculate descriptive statistics like mean, variance, and distribution in Python. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,5 md=3,5 s=0,6 |
| ⁹⁾ I can explain the concept of Eigenvalues and their importance for PCA. My skills in this area <i>before</i> starting the course were | Very low | 25% 25% 0% 25% 25% 1 2 3 4 5 | Very high | n=4 mw=3 md=3 s=1,8 |
| ¹⁰ I can explain the concept of Eigenvalues and their importance for PCA. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,8 md=3,5 s=1 |
| ^{2.11)} I can demonstrate how k-nearest neighbors algorithms work in Python. My skills in this area <i>before</i> starting the course were | Very low | 66,7% 33,3% 0% 0% 0% 1 2 3 4 5 | Very high | n=3 mw=1,3 md=1 s=0,6 |
| ⁽¹²⁾ I can demonstrate how k-nearest neighbors algorithms work in Python. My skills in this area are <i>now</i> | Very low | 0% 0% 66,7% 33,3% 0% | Very high | n=3 mw=3,3 md=3 s=0,6 |
| ^{1:13)} I can demonstrate how support vector machine algorithms work in Python. My skills in this area <i>before</i> starting the course were | Very low | 75% 25% 0% 0% 0% 1 2 3 4 5 | Very high | n=4 mw=1,3 md=1 s=0,5 |
| ¹⁴⁾ I can demonstrate how support vector machine algorithms work in Python. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,3 md=3,5 s=1 |
| ^{1.15)} I can explain the concept of Gaussian mixture models. My skills in this area <i>before</i> starting the course were | Very low | 0% 25% 50% 25% 0% | Very high | n=4 mw=3 md=3 s=0,8 |
| ^{1.16)} I can explain the concept of Gaussian mixture models. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,3 md=3 s=0,5 |
| ^{1.17)} I can use PCA for dimensionality reduction in Python. My skills in this area <i>before</i> starting the course were | Very low | 50% 0% 50% 0% 0% 1 2 3 4 5 | Very high | n=4 mw=2 md=2 s=1,2 |
| ^{2.18)} I can use PCA for dimensionality reduction in Python. My skills in this area are <i>now</i> | Very low | | Very high | n=4 mw=3,3 md=3,5 s=1 |

| ^{2.19)} I can explain the concepts of feedforward neural networks and convolutional neural networks. My skills in this area <i>before</i> starting the course were | Very low | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Very high | n=4 mw=2,3 md=2,5 s=1 |
|--|---------------------|--|--------------|--|
| ^{2.20)} I can explain the concept of feedforward neural networks and convolutional neural networks. My skills in this area are <i>now</i> | Very low | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Very high | n=4 mw=3,3 md=3,5 s=1 |
| ^{2.21)} I can demonstrate the training process of simple neural networks in Python. My skills in this area <i>before</i> starting the course were | Very low | 75% 25% 0% 0% 0% 1 2 3 4 5 | Very high | n=4 mw=1,3 md=1 s=0,5 |
| ^{2.22)} I can demonstrate the training process of simple neural networks in Python. My skills in this area are <i>now</i> | Very low | 0% 25% 50% 25% 0% | Very high | n=4 mw=3 md=3 s=0,8 |
| ^{2.23)} I can explain the link between convolutional neural networks and cross correlation. My skills in this area <i>before</i> starting the course were | Very low | 50% 50% 0% 0% 0% 1 2 3 4 5 | Very high | n=4 mw=1,5 md=1,5 s=0,6 |
| ^{2.24)} I can explain the link between convolutional neural networks and cross correlation. My skills in this area are <i>now</i> | Very low | 0% 25% 50% 25% 0% | Very high | n=4 mw=3 md=3 s=0,8 |
| ^{2.25)} I can lead projects based on large language models (LLMs) in an informed way. My skills in this area <i>before</i> starting the course were | Very low | 66,7% 33,3% 0% 0% 0% 1 2 3 4 5 | Very high | n=3 mw=1,3 md=1 s=0,6 E.=1 |
| ^{2.26)} I can lead projects based on large language models (LLMs) in an informed way. My skills in this area are <i>now</i> | Very low | 0% 100% 0% 0% 0% 1 2 3 4 5 | Very high | n=2 mw=2 md=2 s=0 E.=2 |
| ^{2.27)} I know the most important software engineering principles and instruct my team members to follow them. My skills in this area <i>before</i> starting the course were | Very low | 50% 25% 25% 0% 0% 1 2 3 4 5 | Very high | n=4 mw=1,8 md=1,5 s=1 |
| ^{2.28)} I know the most important software engineering principles and instruct my team members to follow them. My skills in this area are <i>now</i> | Very low | 0% 0% 75% 25% 0% 1 2 3 4 5 | Very high | n=4 mw=3,3 md=3 s=0,5 |
| 3. Questions about the course (2) | | | | |
| ^{3.1)} Was GitHub a helpful tool for conducting the course? | Not helpful at all | 0% 0% 25% 50% 25% | Very helpful | n=4 mw=4 md=4 s=0,8 |
| ^{3.2)} The course follows a clear structure. | Do not agree at all | 0% 0% 50% 50% 1 2 3 4 5 | Fully agree | n=4 mw=4,5 md=4,5 s=0,6 |

| | | | | | | Dr. M | atthias Ca | rl Laupichler, Pl_a | nwesend_202 |
|------|--|---------------------|---------|-----|---------------|-----------|------------|---------------------|----------------------------------|
| 3.3) | The way the course is designed adds to the understanding of the material. | Do not agree at all | 0% | 0% | 0% | 50% | 50% | Fully agree | n=4 mw=4,5 md=4,5 s=0,6 |
| .4) | The course has a good mix of knowledge transfer, interactive elements and discussion. | Do not agree at all | 0% | 0% | 25% | 25% | 50% | Fully agree | n=4 mw=4,3 md=4,5 s=1 |
| .5) | The instructors are responsive to questions and suggestions. | Do not agree at all | 1 0% | 20% | 3 0% | 4 0% | 5 | Fully agree | n=4 mw=5 md=5 s=0 |
| .6) | The instructors clarify the usability and usefulness of the course content. | Do not agree at all | 0% | 20% | 3 | 4 0% | 5 75% | Fully agree | n=4 mw=4,5 md=5 s=1 |
| .7) | The instructors use good teaching materials (e.g., slides, presentations, bibliography, script) to support the learning process. | Do not agree at all | | 20% | 3 0% | 4 | 5 75% | Fully agree | n=4 mw=4,8 md=5 s=0,5 |
| 3.8) | The instructors have good time management skills. | Do not agree at all | 1 | 20% | 3 0% | 4 | 5 75% | Fully agree | n=4 mw=4,8 md=5 s=0,5 |
| .9) | The instructors express themselves clearly and comprehensively. | Do not agree at all | 1 0% | 20% | 3 | 4 | 5 | Fully agree | n=4 mw=4,5 md=5 s=1 |
| | The instructors encourage active participation in the course. | Do not agree at all | 0% | 20% | 3 | 40% | 5 | Fully agree | n=4 mw=5 md=5 s=0 |
| 4. | Questions about the course (4) | | 1 | 2 | 3 | 4 | 5 | | |
| 4.1) | How much did you learn in this course? | Very little | 0% | 0% | 25% ⊢ 3 | 50% | 25% | Very much | n=4 mw=4 md=4 s=0,8 |
| 4.2) | How interested were you in the topic <i>before</i> the course began? | Very little | 0% | 0% | 0% | 25% | 75% | Very much | n=4 mw=4,8 md=5 s=0,5 |

Profillinie

Teilbereich:

Institut für Medizindidaktik Dr. Matthias Carl Laupichler

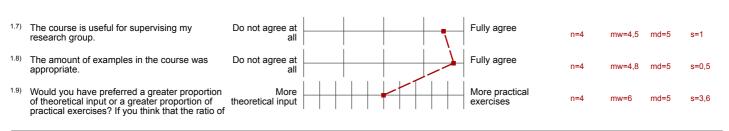
Very low

Name der/des Lehrenden: (Name der Umfrage)

Titel der Lehrveranstaltung: PI anwesend 2025

Verwendete Werte in der Profillinie: Mittelwert

1. Questions about the course (1)



Very high

n=4

n=3

n=3

n=4

n=4

n=4

n=4

n=4

n=4

n=4

mw=2.3

mw=3

mw=2.5

mw=3

mw=2,3

mw=3,8

mw=2,8

mw=3.5

mw=3

mw=3.8

mw=1,3

mw=3,3

mw=1,3

mw=3,3

mw=3

mw=3,3

mw=2

mw=3,3

mw=2.3

md=2.5

md=3

md=2.5

md=3

md=2

md=3,5

md=3

md=3.5

md=3

md=3.5

md=1

md=3

md=

md=3.5

md=3

md=3

md=2

md=3,5

md=2.5

s=1

s=0,8

s=0.6

s=0,8

s=1,5

s=1

s=1,3

s=0.6

s=1,8

s=1

s=0,6

s=0.6

s=0,5

s=1

s=0,8

s=0,5

s=1,2

s=1

s=1

2. Evaluation of Learning Objectives

- **Python programming (in general):** My skills in this area *before* starting the course 2.1) were...
- 2.2) **Python programming (in general):** My skills in this area are *now*...
- 2.3) I can use the Linux terminal/console. My skills in this area *before* starting the course were...
- 2.4) I can use the Linux terminal/console. My skills in this area are now ...
- 2.5) I can explain gradient descent techniques. My skills in this area before starting the course were...
- 2.6) I can explain gradient descent techniques. My skills in this area are *now*...
- 2.7) I can calculate descriptive statistics like mean, variance, and distribution in Python. My skills in this area before starting the course
- I can calculate descriptive statistics like mean, variance, and distribution in Python. 2.8) My skills in this area are now.
- I can explain the concept of Eigenvalues and their importance for PCA. My skills in this area *before* starting the course 2.9)
- I can explain the concept of Eigenvalues and their importance for PCA. My skills in this area are *now*... 2.10)
- I can demonstrate how k-nearest neighbors algorithms work in Python. My skills in this area *before* starting the course
- 2.12) I can demonstrate how k-nearest neighbors algorithms work in Python. My skills in this area are *now*...
- 2.13) I can demonstrate how support vector machine algorithms work in Python. My skills in this area before starting the course
- 2.14) I can demonstrate how support vector machine algorithms work in Python. My skills in this area are *now*...
- 2.15) I can explain the concept of Gaussian mixture models.
- My skills in this area before starting the course 2.16) I can explain the concept of Gaussian
- mixture models. My skills in this area are *now*...
- ^{2.17)} I can use PCA for dimensionality reduction in Python. My skills in this area *before* starting the course
- 2.18) I can use PCA for dimensionality reduction in Python. My skills in this area are *now*.
- ^{2.19)} I can explain the concepts of feedforward neural networks and convolutional neural networks

| | | • | |
|-------|-------|---|--|
| 11.03 | 3.202 | 5 | |

Seite 6

mw=3,3

mw=1,3

mw=3

mw=1,5

mw=3

mw=1,3

mw=2

mw=1.8

mw=3,3

md=3,5

md=1

md=3

md=1,5

md=3

md=1

md=2

md=1.5

md=3

s=1

s=0,5

s=0.8

s=0,6

s=0.8

s=0,6

s=0

s=1

s=0,5

n=4

n=4

n=4

n=4

n=4

n=3

n=2

n=4

n=4

Very high

2.20) I can explain the concept of feedforward neural networks and convolutional neural networks.

Very low

- 2.21) I can demonstrate the training process of simple neural networks in Python. My skills in this area *before* starting the course
- 2.22) I can demonstrate the training process of simple neural networks in Python. My skills in this area are now...
- ^{2.23)} I can explain the link between convolutional neural networks and cross correlation. My skills in this area *before* starting the course
- ^{2.24}) I can explain the link between convolutional neural networks and cross correlation. My skills in this area are *now*...
- 2.25) I can lead projects based on large language models (LLMs) in an informed way. My skills in this area *before* starting the course
- 2.26) I can lead projects based on large language models (LLMs) in an informed way. My skills in this area are *now...*
- 2.27) I know the most important software engineering principles and instruct my team members to follow them.
- 2.28) I know the most important software engineering principles and instruct my team members to follow them.
- 3. Questions about the course (2)

| 3.2) | | Not helpful at all | • | Very helpful | n=4 | mw=4 | md=4 | s=0,8 |
|-------|---|------------------------|--------------|--------------|-----|--------|--------|-------|
| | The course follows a clear structure. | Do not agree at all | ` }_ | Fully agree | n=4 | mw=4,5 | md=4,5 | s=0,6 |
| 3.3) | The way the course is designed adds to the understanding of the material. | Do not agree at all | | Fully agree | n=4 | mw=4,5 | md=4,5 | s=0,6 |
| 3.4) | The course has a good mix of knowledge transfer, interactive elements and discussion. | Do not agree at all | -+ | Fully agree | n=4 | mw=4,3 | md=4,5 | s=1 |
| 3.5) | The instructors are responsive to questions and suggestions. | Do not agree at all | | Fully agree | n=4 | mw=5 | md=5 | s=0 |
| 3.6) | The instructors clarify the usability and usefulness of the course content. | Do not agree at all | | Fully agree | n=4 | mw=4,5 | md=5 | s=1 |
| 3.7) | The instructors use good teaching materials (e. g., slides, presentations, bibliography, script) to support the learning process. | Do not agree at all | | Fully agree | n=4 | mw=4,8 | md=5 | s=0,5 |
| 3.8) | The instructors have good time management skills. | Do not agree at all | | Fully agree | n=4 | mw=4,8 | md=5 | s=0,5 |
| 3.9) | The instructors express themselves clearly and comprehensively. | Do not agree at all | | Fully agree | n=4 | mw=4,5 | md=5 | s=1 |
| 3.10) | The instructors encourage active participation in the course. | Do not agree at all | | Fully agree | n=4 | mw=5 | md=5 | s=0 |
| 4. | Questions about the course (4) | | | | | | | |

Very little ^{4.1)} How much did you learn in this course? Very much n=4 s=0,8 mw=4 md=4 4.2) How interested were you in the topic before Very little Very much n=4 mw=4,8 md=5 s=0,5 the course began?

Auswertungsteil der offenen Fragen

4. Questions about the course (4)

- ^{4.3)} What did you like most about the course?
- * I learned a lot about workflows (Github, Python, Visual Studio etc.).
 * Altogether, very good summary of relevant topics.
 * Great assistance/support by tutors during excercises.
- Interaction and Discussions with the tutors. Discussions about single parts of the scripts improved learning a lot.
- Overall good mix of lectures and exercises.
- ^{4.4)} What could be improved about this course?
- For me too many examples around image classification but of course that depends on the personal use case.
- In the announcement of the course, please be more specific about the requirements (programming skills, mathematical background knowledge etc.).
- More practice. Smaller practical step sizes with group discussions of single steps.

5. Participant statistics

- 5.1) What is your main field of research?
- Biomedical research
- Biostatistics
- MRI Imaging in neurodegenerative Diseases