

Uni Tübingen · Fachschaft Informatik · Sand 14 · 72076 Tübingen

To all first-year students of
Machine Learning (MSc)
winter semester 2022

Tübingen, den 31. August 2022

Machine Learning in Tübingen

Dear newly-enrolled student,

we're happy that you begin your studies of Machine Learning in Tübingen. To facilitate your start to your studies, we want to provide you with some information which will help you get through the first weeks.

Who or what is this „student council“? We, the student council of computer science, are a group of students from the subjects computer science, bioinformatics, media computer science, cognitive science, medical informatics, and machine learning who commit themselves to the students' interests. Our work includes on the one hand the representation of students in university bodies, on the other hand we try to facilitate the university lives of our fellow students (i.e. beginners care, events, mentoring, and so on).

We recommend participating at our beginners events, because the transition to master studies or from another university respectively often proves to be difficult. This way you get a first look into everyday life in Tübingen. At our events there will be many students in higher semesters who are looking forward to answering all your questions. You can find an overview of our events on the following pages.

In case you have questions prior to or after our events, you can reach us by mail at fsi@fsi.uni-tuebingen.de. On our home page <https://www.fsi.uni-tuebingen.de> you can already find helpful information about your studies. If you're interested in collaborating in the student council, just come to one of our meetings! The current date will be published on our web page.

We're looking forward to meeting you at our beginners events!
Your student council of computer science

Editors: Elisa & Linus


Your schedule for the first days

Attention! Due to the current situation regarding COVID-19 the dates for this semester may still change. Check **in any case** <https://www.fsi.uni-tuebingen.de/du-bist-ersti>, to find out the newest information.

Note: Please register for all events, unless it is explicitly stated that no registration is necessary. Further details on the respective event and the registration can always be found on <https://www.fsi.uni-tuebingen.de/du-bist-ersti>.


Crate Run – Friday, October 7th, 2022, Sand

Join us on our Crate Run! We will provide each team of 2-3 persons with a crate (alcoholic or non-alcoholic) (for a small donation). Your goal is to drink up your crate until you reach the finish line. (Non-alcoholic teams will have to come up against small obstacles.) If you are looking forward to meeting new people and a good mood, come on over!

 **bus stop:** Sand Drosselweg (bus lines 2 & 6)

Board Game Night 1 – Thursday, October 13th, 2022, 19:00, Sand

We'd like to invite you to a board game night in relaxed atmosphere at the Sand. We'll provide some games as well as drinks and snacks (for a small donation). Even though our collection is growing steadily, we're more than happy if you bring along your own games!

 **bus stop:** Sand Drosselweg (bus lines 2 & 6)

Hike – Saturday, October 15th 2022, 11:00, in front of Neckarmüller

On a leisurely hike you will get to know not only your fellow students, but also a few lecturers and the worthwhile surroundings of Tübingen! The meeting point is at the Neckarbrücke *in front of the restaurant „Neckarmüller“*.

 **bus stop:** Neckarbrücke (lines 1-22)

City Rally – Tuesday, October 18h 2022, ca. 16:00


On this evening, you can participate in a team-based scavenger hunt across the city, where you will get to know interesting, beautiful as well as disturbing spots within Tübingen. As a side effect, you will hopefully get to know your new home town a bit better and make new friends.

Pub Crawl – Wednesday, October 19th 2022, ca. 18:00

Tübingen is laced with small bars and pubs that have a significant impact on the night life in Tübingen. In order to calm down from the stress of this information-filled day, we'd like to invite you to go bar-hopping with us. We'll divide up into small groups and visit the different bars in the historic town center. Please bring enough cash, most places we will visit don't accept cards (*none whatsoever*).


BBQ – Saturday, October 22th 2022, 17:00, Sand, garden

You're not in the mood for cooking this evening? Fear not! The student council invites you for a BBQ. Bring whatever you want to put on the grill, please also bring your own plates and cutlery. The garden has enough space for stuff like volleyball, football etc. as well.

 **bus stop:** Sand Drosselweg (bus lines 2 & 6)

Board Game Night 2 – Thursday, October 27th, 2022, 19:00, Sand

We'd like to invite you to a board game night in relaxed atmosphere at the Sand. We'll provide some games as well as drinks and snacks (for a small donation). Even though our collection is growing steadily, we're more than happy if you bring along your own games!

 **bus stop:** Sand Drosselweg (bus lines 2 & 6)

Clubhausfest – Thursday, November 3rd 2022, 21:00, Clubhaus

Every thursday during the lecture period, a different student body or group of students organizes the „Clubhaus Fest“ in the Clubhaus, which locates directly opposite of the new auditorium. Today the attendance is particularly worthwhile, because the student councils of computer science, cognitive science and psychology are hosting the event!

 **bus stop:** Uni/Neue Aula or Hölderlinstraße

What to expect in your studies timetable

In your master studies you are relatively free in how you compile your timetable. However, it is important that you cover your optional areas of courses with ECTS credits. The following tables show some examples of choices for courses you can make, depending on which direction you want to focus:

Focus on Theory:

1st Semester (Winter)	2nd Semester (Summer)	3rd Semester (Winter)	4th Semester (Summer)
Deep Learning (6 ECTS)	Statistical Machine Learning (9 ECTS)	Practical ML (6 ECTS)	Master's Thesis (30 ECTS)
Data Literacy (6 ECTS)		Seminar (3 ECTS)	
Mathematics of ML (9 ECTS)	Probabilistic Inference and Learning (9 ECTS)	Numerical Algorithms of Machine Learning (6 ECTS)	
		Interactive Theorem Proving (9 ECTS)	
Convex and Nonconvex Optimization (6 ECTS)	Reinforcement Learning (6 ECTS)		
Algorithms and Complexity (9 ECTS)		Efficient Machine Learning in Hardware (3 ECTS)	
	Ethics in Science (3 ECTS)		
ECTS			
ML-FOUND	Foundations of Machine Learning	24	
ML-TOPIC	Further Topics in Machine Learning	36	
ML-CS	General Computer Science	18	
ML-EXP	Expanded Perspectives	12	
Thesis	Master Thesis	30	

Focus on Industrial Applications:

1st Semester (Winter)	2nd Semester (Summer)	3rd Semester (Winter)	4th Semester (Summer)
Deep Learning (6 ECTS)	Statistical Machine Learning (9 ECTS)	Self-Driving Cars (6 ECTS)	Master's Thesis (30 ECTS)
Data Literacy (6 ECTS)		Practical ML (6 ECTS)	
Mathematics for ML (9 ECTS)	Probabilistic Inference and Learning (9 ECTS)	Advanced Java	
		Advanced SQL (6 ECTS)	
Cognitive Modelling (6 ECTS)	Machine Learning in Graphics and Vision (6 ECTS)	Seminar (3 ECTS)	
German as a Foreign Language (3 ECTS)	German as a Foreign Language (3 ECTS)	German as a Foreign Language (3 ECTS)	
			ECTS
ML-FOUND			24
ML-TOPIC			36
ML-CS			18
ML-EXP			12
Thesis			30

Focus on Biomedicine:

1st Semester (Winter)	2nd Semester (Summer)	3rd Semester (Winter)	4th Semester (Summer)
Deep Learning (6 ECTS)	Statistical Machine Learning (6 ECTS)	Practical ML (6 ECTS)	Master's Thesis (30 ECTS)
Data Literacy (6 ECTS)		Time Series (or different one from applied ML) (6 ECTS)	
Mathematics for ML (6 ECTS)	Probabilistic Inference and Learning (6 ECTS)	Computational Microbiome Analysis (or different one from Bio/Medical) (6 ECTS)	
Visualization of large-scale data (6 ECTS)	Neural Data Analysis (6 ECTS)	Medical Data Science (or different one from Bio/Medical) (6 ECTS)	
German as a Foreign Language (3 ECTS)	Ethics in Science (3 ECTS)	Seminar (3 ECTS)	
	German as a Foreign Language (3 ECTS)	German as a Foreign Language (3 ECTS)	
ML-FOUND	Foundations of Machine Learning		ECTS
ML-TOPIC	Further Topics in Machine Learning		24
ML-CS	General Computer Science		36
ML-EXP	Expanded Perspectives		18
Thesis	Master Thesis		12
			30

All three lectures out of *Foundations of Machine Learning* are mandatory, you need 24 ECTS. Out of *Diverse Topics in Machine Learning* you need 36 ECTS, of which no more than 6 ECTS can be from seminars and no more than 6 ECTS can be from practical ML. The areas *General Computer Science* and *Expanded Perspectives* are special. Here, you can attend any graded lecture out of Computer Science (for General Computer Science) or any graded lecture out of all the offered lectures in the whole university, except university sports (for Expanded Perspectives) for a total of 18 ECTS and 12 ECTS respectively. Further Information can be found in your module handbook at:

<https://uni-tuebingen.de/de/135400>

Important Online Portals

To avoid missing out on any information concerning lecture times and places, please take a look at the two most important online learning portals.

- **alma** <https://alma.uni-tuebingen.de/>
alma is the central course catalogue of the university. Once you've found your course here, you will find links to any course specific websites or portals. Towards the end of the semester you can register for your exams via alma as well.
- **Ilias** <https://ovidius.uni-tuebingen.de/>
Ilias is the most commonly used communication tool. Although it holds a list of all courses, too, we would recommend alma as the start of your search for courses.

Starting times and locations

Soon you'll notice: 9 o'clock means 09:15. At university lectures usually start c.t. (*cum tempore* - lat. with time). If something starts „sharp“, it will be announced as s.t. (*sine tempore* - lat. without time). In terms of times and locations you should take a look at alma before lectures start:

<https://alma.uni-tuebingen.de/>

Mailinglists

There are several mailing lists so that important information reaches you.

The complete list can be found here: <https://www.fsi.uni-tuebingen.de/infos/maillists/>

- **info-studium: Subscription is mandatory.** This is the only way the professors can reach you!
Registration at: <https://www.fsi.uni-tuebingen.de/mailman/listinfo/info-studium>.
- **info-talk:** This list is for topics that are not directly related to your studies, but may still be of interest. Registration at: <https://www.fsi.uni-tuebingen.de/mailman/listinfo/info-talk>.
- **info-jobs:** For paid offers of HiWi¹ jobs, internships as well as work-study jobs. Registration at: <https://www.fsi.uni-tuebingen.de/mailman/listinfo/info-jobs>.
- **coding:** Hackathons and other related events.
Registration at: <https://www.fsi.uni-tuebingen.de/mailman/listinfo/coding>.
- **sport:** If you are one of those *computer scientists who, contrary to the stereotype, like to do sports, the list sport is recommended to you. Registration at: <https://www.fsi.uni-tuebingen.de/mailman/listinfo/sport>.

Public transport in Tübingen

Bus schedules can be found online² and in the Naldo app for Android and iOS.

The best way to get to the „Morgenstelle“ (see city map on the last page) is to take the bus (destination stop BG-Unfallklinik³). There is a very limited number of parking lots at the Morgenstelle, but one has to apply for a permission to use them, first. Most Master events/lectures take place on the „Sand“, the place of the WSI (Wilhelm-Schickard-Institut). To get to the Sand, take line 2, stop *Sand Drosselweg*. It is also easily reached by car as there are multiple parking lots. Some Machine Learning lectures take place in the Maria-von-Linden-Straße 6. To get there, take line 3, stop *Maria-von-Linden-Straße*. With your semester fee you have already paid part of the semester ticket for the bus (in addition to the student union fee and the matriculation fee). The semester ticket

¹wissenschaftliche/studentische Hilfskraft

²<https://naldo.de/>

³**not** „Auf der Morgenstelle“!

costs 127,30 EUR and is valid in the whole Naldo area, a public transport system around Tübingen (unfortunately not to Stuttgart, but to Überlingen at Lake Constance). The ticket is valid from 1 October and is available in the DB travel centres and online⁴. In order to buy the semester ticket offline, you will need to show your student ID and the Semester Ticket Certificate from the data control sheet. For the online purchase you need a login ID of the university (starting with zx).

Naldo's leisure time regulations do also apply: Here you can use buses and trams within the Naldo area free of charge on weekdays from 7 p.m. and all day on weekends. All you need is your student card with the Naldo logo on it. Especially interesting if your parents are visiting Tübingen: On Saturdays you can take a free bus in the city area (tariff level 11)⁵, no matter if you are studying or not.

Housing in Tübingen

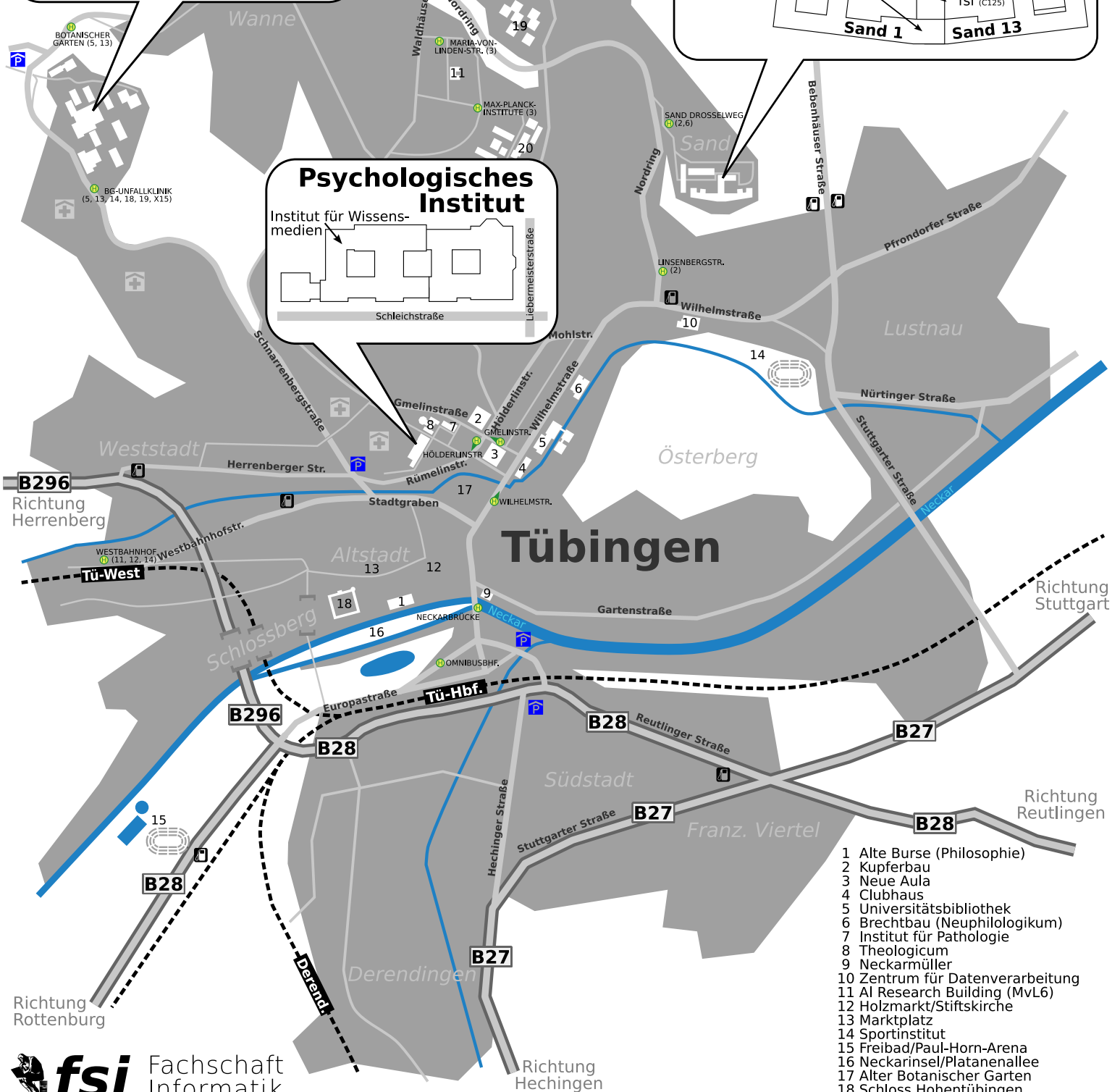
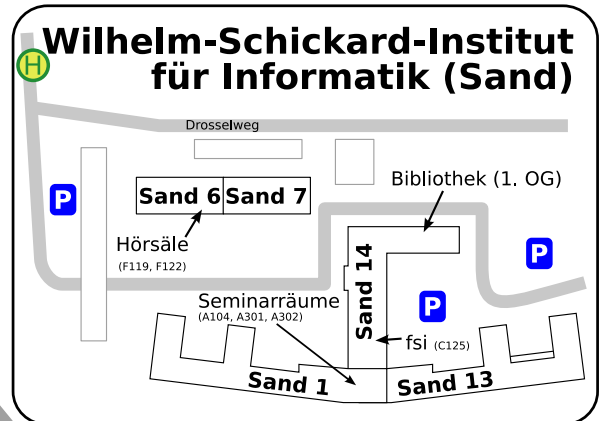
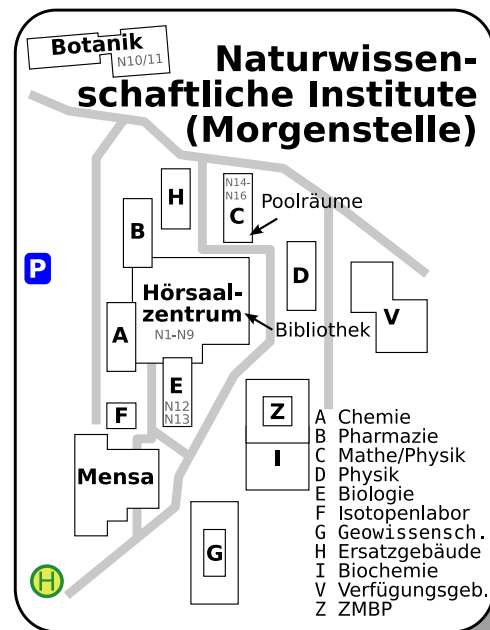
Unfortunately, the topic of housing has not lost its explosive power in Tübingen in recent years, so that it may be difficult to find accommodation. We recommend the following two Studierendenwerke as your first points of contact: Application forms for a place in a hall of residence can be obtained from either the Studierendenwerk AdöR in the administration of the dormitory, Fichtenweg 5, 72076 Tübingen, or at the Studierendenwerk e.V., Rümelinstraße 8, 72070 Tübingen. For the private housing market, Wednesday and Saturday editions of the Schwäbisches Tagblatt are available. On the Internet the platform www.wg-gesucht.de is your best option. You can find more information on our homepage at <https://www.fsi.uni-tuebingen.de/erstsemester-faq/>.

⁴<https://tickets.naldo.de/>

⁵At least at the time of the editorial deadline this regulation still applies

Tübingen

für Informatiker, Bioinformatiker, Medieninformatiker,
Medizininformatiker und Kognitionswissenschaftler & ML



- 1 Alte Burse (Philosophie)
- 2 Kupferbau
- 3 Neue Aula
- 4 Clubhaus
- 5 Universitätsbibliothek
- 6 Brechtbau (Neuphilologikum)
- 7 Institut für Pathologie
- 8 Theologicum
- 9 Neckarmüller
- 10 Zentrum für Datenverarbeitung
- 11 AI Research Building (MvL6)
- 12 Holzmarkt/Stiftskirche
- 13 Marktplatz
- 14 Sportinstitut
- 15 Freibad/Paul-Horn-Arena
- 16 Neckarinsel/Platanenallee
- 17 Alter Botanischer Garten
- 18 Schloss Hohentübingen
- 19 Studentendorf Waldhäuser-Ost
- 20 Max-Planck-Campus