Message from the Editors

We have designed our new Bilingual Bachelor's Program (BiBa) in Computer Science to form a community of scholars who thrive by interacting with one another.

Networking is more than just staying in touch, it is a way of life and a way to get things done. The current newsletter is a first step in connecting those of you who are interested in joining the program as students with one another and with those of us who are organizing the program. It is also meant for people who support our (prospective) students, like teachers and sponsors and friends.

This is the first edition of our newsletter. It is to contain items about what's new and exciting at BiBa, and useful information about the program for prospective students and their teachers. It is also to contain something about the contents in computer science which the program conveys. In this issue, we have chosen to highlight the work of a new faculty member, Prof. Binder, who teaches and does research in methods and tools for artificial intelligence in computer vision.

We have included on our mailing list everyone who gave us their mail addresses, in particular at the end of our presentations in High Schools ("Gymnasien") or Prep Schools ("Studienkollegs"), or anyone who has written us at our hotline asking for more information.

Please feel free to pass on the newsletter to anyone who might be interested. By sending us a short note to our hotline, anybody can sign up to our mailing list to receive it – or can unsubscribe if you're tired of reading about all the great things we're doing. Currently we are planning to produce it from time to time – more often during our application season, less often during the rest of the year. Each edition will contain something about the content of our program (i.e. some computer science) plus some news items, explanations of concepts, or reminders of deadlines, or interviews with important people with a relationship to our BiBa.

As folks who indulge in networking, we who produce this newsletter appreciate feedback. Please write us to our hotline BiBa(at)ovgu.de to tell us what you liked or disliked in the newsletter, to make suggestions – or to ask a question.

A Special Message to Teachers

We as persons responsible for the BiBa have a sense of mission and purpose. And we know that we share this with many teachers who teach bilingual classes. We want to spread the idea of bilingual education internationally, and the good news of our program among potential students. One way is for us to visit institutions like schools personally. We are happy to do so, and are interested in expanding our network by getting to know others with a similar mission.

If you would like us to inform your students or members about the program, please take up contact with us. We will be delighted to meet you and others in your organization in person. The easiest way to contact us is to send us a message to our hotline, BiBa(at)ovgu.de. We're looking forward to hearing from you!

Your
BiBa Newsletter Editors

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BiBa with 4-Day In-Presence-Week

It's only a couple of weeks ago (it seems …) that we got approval to introduce a new concept into our BiBa:

For the inaugural class starting this Fall, we plan to schedule all classes from Monday morning at 11 am until Thursday evening at 7 pm. This means that there will be a couple more classes from Monday to Thursday while we are in session, but Fridays will not require the presence of our students in class. Fridays can be used for any one of a variety of activities, be it to study on your own for the entire day, or to work in groups to do your homework. You can use the day for networking with your classmates, or you can travel somewhere and do whatever tickles your fancy. It's time for you to schedule according to your own priorities.

We believe to be the first degree program to use this concept for recruiting purposes. It will also give those of our students who are not from in or around Magdeburg, but also not too far away, the opportunity to go home to visit their family and friends from time to time without missing class.

We will evaluate how this 4 Day In-Presence-Week has contributed to the well-being of our students at the end of the academic year. After that we will decide whether to offer this for those starting their studies in 2025. For students in 2nd or 3rd year, you can choose electives yourselves and thereby choose your schedule to suit your individual needs. But for this coming academic year 2024/25, we expect the students in our inaugural class, the Class of 2027, to be able to decide themselves what to do with Fridays.

BiBa on Tour in Poland

Prof. Strothotte recently visited two schools in Poland – the one in ul. Wojciecha Żywnego in Warsaw on April 10, 2024 and the Jan Kochanowski Liceum in ul. Kilińskiego in Radom, an hour to the south, on April 12, to give presentations about the BiBa program. The schools have bilingual programs where students study German with the goal of reaching the C1-level, taking courses e.g. in Geography and History in German. The school in Radom also has a bilingual program in English.

In return, a busload of 18 students and two teachers from Radom visited us at the University of Magdeburg on May 4th. They were welcomed personally by the University President Prof. Strackeljahn and spent the day looking around the university's Open House.

We also gave a talk about BiBa at a workshop for German teachers at Polish high schools, organized on April 17, 2024 in Nieporęt, an hour north of Warsaw by the Central Office for Schools Abroad of the Germen Foreign Ministry.

Students chilling in between classes by the University Library

Application Portals Now Open

Starting today, May 15, 2024 the portal for filing applications for admission to our BiBa program for students with a German "Abitur" is now open (see myovgu.ovgu.de). Students can expect a reply (hopefully an "admit" (!)) within about two weeks of submitting a completed application.

Please note that students with a school leaving certificate from outside of Germany apply for admission through uni-assist, an organization which handles certificates awarded abroad. This portal has been open since April 15, 2024. For applications of foreign students via uni-assist, we expect the process to take about 8 weeks because so much more has to be checked, like the authenticity of certificates issued by another country and whether the collection of documents actually corresponds to the infamous "Hochschulzugangsberechtigung" (HZB).

Important Dates

The two portals mentioned above will be open until July 15, 2024. By that time, all applications for admission in the Fall of 2024 must be complete and submitted. The welcome week begins on Monday, October 7, 2024; attendance of all new students is expected as of then. Classes begin on Monday, October 14, 2024.

New Brochures

The BiBa Websites in our two languages, German (inf.ovgu.de/BiBa) and English (inf.ovgu.de/en/BiBa), contain new brochures which were produced for our recent Open House. They can be downloaded as pdfs.

New Professor for Computer Vision at the Faculty of Computer Science

Our most recent addition to the Faculty of Computer Science, which is responsible for the BiBa, is Dr. Alexander Binder, who joined us from Singapore in April, 2024.

Professor Binder studied Mathematics at Humboldt University in Berlin and earned his PhD in Computer Science at the Technical University of Berlin in 2013 with a thesis entitled "Bag of machine learning concepts for visual concept recognition in images". He spent most of the past decade teaching and researching in Singapore, first as an Assistant Professor at Singapore University of Technology and Design (SUTD) and subsequently as an Associate Professor at Singapore Institute of Technology. Between these two positions in Singapore, Alexander Binder was on the faculty of the University of Oslo for about a year.

In Magdeburg, Prof. Binder is starting a new research group in Computer Vision. This area has moved a lot from the initial classification of images and object detection. Image generation from text with diffusion models and deepfakes are known to a wider audience.

Nowadays, computer vision is heavily influenced by large language models, which gave rise to large multimodal models (LMMs).

Examples of his work are shown in Fig. 1 and Fig. 2. Such models for example can detect objects described by an arbitrary given textual input, answer natural language questions to images, or segment images based on textual queries. Other methods, like visual prompting, are learning to execute tasks on images based on example pairs of input and result images.

In this area, Dr. Binder develops methods and tools in explainable AI for vision which produce scores for every pixel of an image telling how much it contributes to a prediction.

He will be teaching courses in 3rd year of our bachelor's degrees as well as in our master's programs, and serve as advisor for PhD students. He still enjoys writing code by himself as time allows. Apart from that he likes landscapes, instant noodles and paneer butter masala, as well as watching sports from afar.

By the way: He shares his name with a famous movie director and a photographer (with the horned shadow photo) – but the three of them are different people!
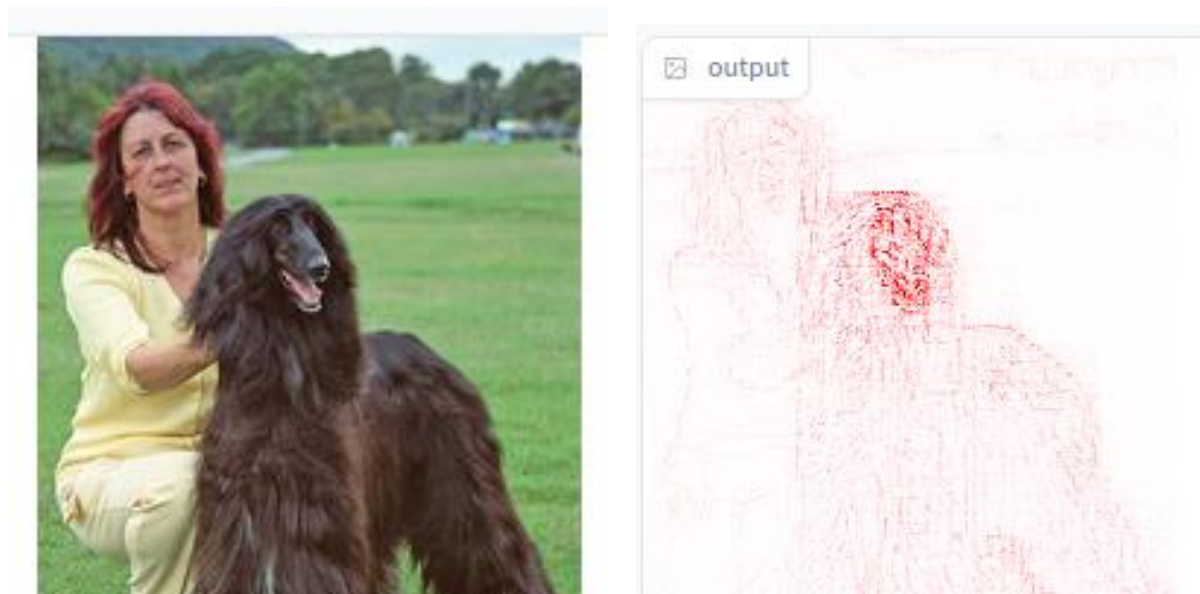

Fig. 1: Explanation for a dog class predicted by a vision transformer model. Note the focus on the head of the dog because the predictor is a discriminative model and the dog body is not discriminative between dog races present in the ImageNet dataset.
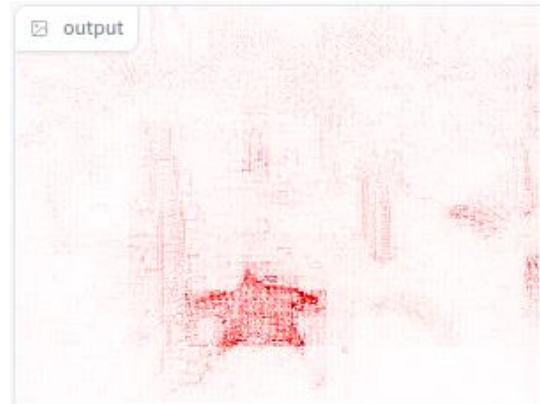
Fig. 2: Explanation for the concept of starfish (left). Unlike in the dog example, the whole object is important. Yet, not everything of the same orange color contributed equally to the prediction.

Disclaimer

Bilingual Bachelor's Program (BiBa) in Computer Science

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