Teaching Philosophy Statement of Vitalii Zhukov

I have had the privilege to work as a co-instructor for three years during my doctoral education. I co-instructed the Ubiquitous Computing and Statistical Methods courses along with my advisor Prof. Pavlidis. The Ubiquitous Computing course focuses on app design and development for iPhones and Apple Watches, while the Statistical Methods course focuses on data analytics, R programming, and visualization of multiple regression, logistic regression, and multinomial regression models. I was delivering the programming part of the class lectures, while Prof. Pavlidis was delivering the theoretical part. Most doctoral students have only grading experience, having served as Teaching Assistants. I am one of the few doctoral students with actual instructional experience both at the undergraduate (Ubiquitous Computing) and graduate levels (Statistical Methods). Hence, my teaching philosophy has been greatly shaped by this experience, as well as my prior corporate career.

In both the Ubiquitous Computing and Statistical Methods courses, we have been following the scaffolding model, that is, we have been building the background of students in a topic starting with theory, then showing them the practical implementation of this theory via programming, and finally asking them to do it themselves through some homework with a very fast turnaround time (i.e., a couple of days). This teaching style has been accompanied by two underlying principles: First, always come up with novel examples and homework themes and never recycle old themes from prior years. This kept the class exciting and minimized plagiarism. Second, solicit anonymous feedback from students via weekly surveys so that the instructional team can fix problems on the spot, rather than let these problems fester till the end of the semester, when the school formally solicits course evaluations from students.

The greatest reward in my teaching journey was to see the students gradually become experts during the semester and expressing their appreciation for our hard and effective work. Please note that the Ubiquitous Computing and Statistical Methods classes enroll 60 students each at a time. Hence, during my three-year tenure I taught in total more than 500 students. Information about the two courses, including the weekly feedback and ratings by students, can be accessed at https://cpl.uh.edu/index.php/courses. I provide below a few student comments from the course feedback forms, as examples:

"[Fine Stars] *Gained a lot through this course. The professor and his associates are so good and friendly and are available and helpful throughout the semester. Will surely recommend other to take this course. Thank you, professor, Vitalii and Fettah for this amazing semester.*" **In Ubiquitous Computing – Fall 2022.**

"[Five Stars] *Well ... that was a lot to be learned in a short period of time, every week except for the exams week I wished the classes never ended, they were entertaining, and challenging. The dynamic used to teach was great. I'm pretty sure 95% of the class knows how to build an app by now, the 5% are the ones that dropped if there were any drops. Overall great class! The Professor, Vitalii, and Kiran helped us a lot, and I'm very thankful for them, I liked this class so much that I recommend it to some friends.*" **In Ubiquitous Computing – Fall 2022.**

"[Five Stars] *The course exceeded my expectations in terms of both content and instruction. The professor's, Vitalii's and Fettah's expertise, enthusiasm, and commitment to student success made this an exceptional learning experience, and I am grateful for the opportunity to have taken this course.*" **In Statistical Methods – Spring 2023.**

Accordingly, my teaching philosophy as faculty member will be anchored to the following principles:

Practical Application: I believe in integrating real-world examples and hands-on experiences to bridge the gap between theory and practice. This approach not only reinforces classroom learning but also prepares students for the challenges they will face in their careers.

Critical Thinking: I aim to cultivate a spirit of inquiry and critical thinking among my students. I encourage them to ask questions, explore problems, and find innovative solutions through semester-long course projects. This approach nurtures independent thinking and problem-solving skills.

Holistic Understanding: I emphasize the importance of a holistic understanding of Computer Science. Students should be proficient in delving into the intricacies of systems and software while also being capable of abstracting concepts to create efficient and high-functioning entities.

Effective Communication: Communication is a vital skill in the tech world. I work to foster effective communication skills among students, helping them convey complex ideas with clarity and precision. The vehicle I use for that purpose is frequent presentation assignments, complete with Q&A sessions.

Feedback and Adaptation: I value the input of students and I am open to their suggestions for elevating the learning experience. Their feedback informs my teaching methods, allowing for continuous improvement.

My educational, research, and instructional background put me in an excellent position to teach a variety of computer science courses. First, thanks to my instructional record, I am eminently qualified to design and teach a course on smartphone and smartwatch app design and development, complete with user-interface and human-computer interaction underpinnings, which are often ignored in such courses. Furthermore, my exposure in large language models in my doctoral research, qualifies me to design a teach a course on the hot topic of large language models. These two courses are close to my heart, but I am open to teach any other computer science course that would fulfill the needs of the department.