Curriculum Vitae
Hao Peng

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Education

Degree	*Major*	*Institution*	*Date*	*Achievements*
Ph.D.	Computer Science	University of Georgia	August 2019	GPA: 3.75, Magma Cum Laude, Minor in Statistics
B.S.	Computer Science Statistics	University of Georgia	May 2013	GPA: 3.93, Summa Cum Laude, with Highest Honors

Employment

Position	*Department/School*	*Institution*	*Dates*
Senior Lecturer	School of Computing	University of Georgia	Fa2025-Present
Lecturer	School of Computing	University of Georgia	Fa2019-Sp2025
Graduate Instructor of Record	Computer Science	University of Georgia	Sp2016-Sp2019
Graduate Teaching Assistant	Computer Science	University of Georgia	Fa2013-Fa2015
Peer Tutor	Division of Academic Enhancements	University of Georgia	Fa2011-Sp2013

Instruction

The University of Georgia

Course Number	*Title*	*Offerings*
CSCI 1100	Topics in Computing	Fa19
CSCI 1301	Introduction to Computing and Programming	Fa17, Sp18, Su18, Sp19, Sp20
CSCI 1730	Systems Programming	Su17, Fa18, Su21, Fa21, Su22, Fa22, Fa23
CSCI 1730E	Systems Programming	Su23, Su24
CSCI 2610	Discrete Mathematics for Computer Science	Fa16, Sp17, Fa19, Fa20, Sp21, Su21, Sp22, Sp23, Sp24, Fa24, Sp25, Fa25, Sp26, Fa26
CSCI 2611	Discrete Mathematics for Engineers	Sp16, Sp23
CSCI 2670	Introduction to Theory of Computing	Sp20, Sp22, Sp23, Sp24, Fa24, Sp25
CSCI 2720	Data Structures	Su16, Sp21
CSCI 3360	Data Science and Applied Machine Learning I	Fa20, Fa21, Su22, Fa22, Fa23, Fa25
CSCI 3360E	Data Science and Applied Machine Learning I	Su23
CSCI 4360	Data Science and Applied Machine Learning II	Sp26, Fa26

(Fa = Fall semester, Su = Summer semester, Sp = Spring semester)

Honors and Awards

- Student Career Success Influencer Award (2024)
- Active Learning Summer Institute 2023 participant, Univeristy of Georgia (Summer 2023)
- DeLTA Project participant, University of Georgia (2021-2022)
- Best Student Paper Award, BigData Congress (June 2019)
- Best Student Paper Award, BigData Congress (June 2018)
- Outstanding Teaching Assistant Award, Computer Science, University of Georgia (March 2018)
- Excellence in Graduate Recruitment Funds (EGRF) Award, University of Georgia (August 2013)
- Outstanding Undergraduate Student Award, Computer Science, University of Georgia (May 2013)
- Honors Program membership, University of Georgia (August 2010 - May 2013)
- Harris Scholarship, University of Georgia (August 2010)

Teaching Statement

Computer science has become an increasingly popular choice for students, and as a teaching faculty member, it is my utmost goal to leave students more passionate and prepared about their futures in computer science after taking my courses. Our field presents its own unique challenges and difficulties, though some may inevitably move away from computer science and pursue other fields of discipline, I still hope that my own passions about teaching computer science may be an inspiration for all of my students who are actively chasing after their goals and dreams during their years in the university.

When I was in high school, I did many hours of volunteering tutoring service to my fellow students, and I also worked as a peer tutor while in college. Those were my very initial experiences in teaching. It was a truly rewarding experience when I saw how the countenance of my fellow peers changed after they understood my explanations of solving a problem. I have developed a passion for teaching since then. While working on my doctorate degree, I actively pursued teaching opportunities and was given the privilege to do so during the latter 3 years of completing my degree. I still remember the very first college course that I taught. Standing in front of a full classroom of students was quite a different experience from walking around and doing short tutoring sessions to a small group of students. I was nervous but wanted to do my best. The pace of my lectures may have been too fast at times. Gradually throughout that semester, I had become more comfortable and confident in teaching my students. I recall reading the course evaluations after the semester ended, and my students left many encouraging comments about my class, noting that even though this was my first-time teaching, their experiences in the class significantly improved throughout the semester. This process of learning how to become more effective at teaching has been a wonderful experience. After completing my degree, I decided to stay in the School of Computing and continue to teach full-time.

I believe passion can be contagious, and my students can gain passion about computer science if they can see that their teachers are passionate about the field. Since I teach many introductory level computer science courses, not all of them have fully decided that they want to pursue computer science in a future career. Some may enter my class truly passionate about computer science, some came because they have heard of the potential abundant career opportunities, and others may just be clueless as far what to pursue in life. As their instructor, I have a unique opportunity to introduce my students about our field. When I enjoy and have fun teaching in the classroom, my students may be inspired be passionate as well. Even if some of them choose other fields of discipline later, I still hope that having seen a passionate teacher, they would be searching for something that they can truly be passionate as well.

Teaching has been a great learning experience for me as well. To provide my students with better experiences, I have tried to stay current with the most update to date teaching strategies and tools. In recent years the university has been heading in the direction of encouraging more faculty members to teaching using active learning pedagogies. I initially heard of this from fellow colleagues and their good experiences teaching this way and I decided to give try it out myself. As reflected in the students' comments from the course evaluations, many students feel like that they have learned better than they would have in a traditional lecture-based class. I would admit that it took more work than I initially thought to convert a course into one that relies on active learning pedagogies. I had gained experience in active learning both through co-teaching multiple sections of a course with colleagues who provided the materials for active learning, as well as designing and creating my own active learning course materials. Having seen the benefits, I will likely continue to work to redesigning my courses using active learning pedagogies.

Another important goal of my teaching is to leave students more prepared in their future career

in computer science. Many alumni have noted the significantly different levels of expectations between their college years and their current job in a company. Indeed, there certainly should be differences since the college years were to be preparatory in nature, while an actual job demands employees to put to practice what they have learned, and often times, what they are continuing to learn. However, as a teacher, it is an important aspect of my job to introduce to my students the level of expectation that a future job may require and inspire them to be preparing for it early. For example, many tech companies interview candidates by requiring them to solve programming problems effectively and efficiently in a very short amount of time. Most students are not used to this since they are typically given a week or two to turn in a programming assignment in school. Recently in my classes I have tried to incorporate these types of timed programming practices into my courses, so that students are made aware early on that they will be expected to do so during an actual interview. During this process they may also realize that it is absolutely essential for them to truly learn the course materials and know them by heart in order to be successful in their future careers, rather than having the attitude of learning just enough to obtain a certain course grade.

It is my sincere desire for my students to see me as someone who is passionate about teaching, actively engaging in more effective teaching pedagogies, and preparing them well for their future career. I wish to be more effective at teaching through constructive feedback from students and communications with fellow colleagues. The process of learning and improving myself, whether in teaching or any other aspects of life, is likely to be a life-long journey. Giving the students my best has been a truly rewarding experience for me as well.

Publications

Google Scholar: `https://scholar.google.com/citations?user=ZuSxOzgAAAAJ`
ResearchGate: `https://www.researchgate.net/profile/Hao_Peng44`

Journal Articles

1. Khalifeh AlJadda, Mohammed Korayem, Camilo Ortiz, Trey Grainger, John A Miller, Khaled M Rasheed, Krys J Kochut, Hao Peng, William S York, Rene Ranzinger, et al. Mining massive hierarchical data using a scalable probabilistic graphical model. *Information Sciences*, 425:62–75, 2018

2. Mustafa V Nural, Michael E Cotterell, Hao Peng, Rui Xie, Ping Ma, and John A Miller. Automated Predictive Big Data Analytics Using Ontology Based Semantics. *International Journal of Big Data*, 2(2):43–56, 2015

Conference Proceedings

1. Hao Peng, Nicholas Klepp, Mohammadhossein Toutiaee, I. Budak Arpinar, and John A. Miller. Knowledge and situation-aware vehicle traffic forecasting. In *2019 IEEE International Conference on Big Data (Big Data)*, pages 3803–3812. IEEE, 2019

2. Hao Peng and John A Miller. Multi-step Short Term Traffic Flow Forecasting Using Temporal and Spatial Data. In *International Conference on Big Data*, pages 110–124. Springer, 2019

3. Hao Peng, Santosh U Bobade, Michael E Cotterell, and John A Miller. Forecasting Traffic Flow: Short Term, Long Term, and When It Rains. In *International Conference on Big Data*, pages 57–71. Springer, Cham, 2018

4. Mustafa V Nural, Hao Peng, and John A Miller. Using meta-learning for model type selection in predictive big data analytics. In *Big Data (Big Data), 2017 IEEE International Conference on*, pages 2027–2036. IEEE, 2017

5. John A Miller, Hao Peng, and Casey N Bowman. Advanced tutorial on microscopic discrete-event traffic simulation. In *Simulation Conference (WSC), 2017 Winter*, pages 705–719. IEEE, 2017

6. Hao Peng, Zhe Jin, and John A Miller. Bayesian Networks with Structural Restrictions: Parallelization, Performance, and Efficient Cross-Validation. In *Big Data (BigData Congress), 2017 IEEE International Congress on*, pages 7–14. IEEE, 2017

7. John A Miller, Hao Peng, and Michael E Cotterell. Adding Support for Theory in Open Science Big Data. In *Services (SERVICES), 2017 IEEE World Congress on*, pages 71–75. IEEE, 2017

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