# **COMPUTER SCIENCE PROGRAM**

# The Computer Science Department at UT Dallas is one of the largest in the US with approximately 4,700 students and a distinguished faculty that has won numerous awards.

## Research Highlights

- Broad areas of research: Al, ML, Data Science, Software Engineering, Cyber Security, Networks, Systems, Theory.
- Over \$45 Million total external funding over the last 5 years.
- Faculty includes 17 NSF CAREER Award Winners, with 2022 awardees: Wei Yang and Shuang
- CS Faculty direct 4 research institutes, 8 research centers, and one education/outreach center.
- CS Dept. ranked #8 in NLP, #5 in Software Engineering, and #7 in Embedded and Real-Time Systems in CSrankings.org ('10-'20 period).
- Prof. Murat Kantarcioglu and Latifur Khan named IEEE Fellows.
- Dr. Xiaohu Guo and his Collaborators Awarded the ACM SIGGRAPH 2023 Technical Papers Best Paper Award.
- UT Dallas joins new USdot national cybersecurity center to help protect connected vehicles, drones, and more.
- Prof. Bhavani Thuraisingham Honored with the 2023 Taylor L. Booth Education Award for "Outstanding Leadership in Cyber Security Education and Data Science Education, as well as Mentorship of Members of Systemically Marginalized Groups."
- Center for Applied AI and Machine Learning (CAIML) Assists InfoVision To Develop Drone-Supported Inventory System.
- UT Dallas CS Researchers Apply Power of AI To Forecast Energy Supply, Demand.
- Members of UT Dallas's Machine Learning Center, directed by Professor Sriraam Natarajan and the Cyber Security Research and Education Institute, directed by Professor Kevin Hamlen, published seven papers at AAAI 2021.

## Student Numbers/Growth/Education Highlights

- Approximately 5,680 total students (4,659 Undergraduates, 863 Master's Students, 158 PhDs).
- Awarded approximately 956 Bachelors, 663 Masters, and 15 PhDs degrees in 2022-23.
- Ranked #4 nationally for the total number of students, #11 for the number of female students.
- Ranked #11 nationally for the no. of Hispanic students, #14 for African American students.
- Ranked #21 in 2014 LinkedIn's ranking of "Best Universities for Software Developers."
- Nearly 80 teams completed industry-sponsored senior-design, capstone projects.
- Platinum sponsor of Grace Hopper Conference; sent 30 Students to GHC 2018.
- More than a dozen CS student organizations under the umbrella of the student chapter of the ACM.
- Student groups include: ACM, Women Who Compute, AI Society, VR Society, Cyber Security Group.
- Center for CS Outreach runs one of the largest university-based K-12 outreach program.
- NSA Center of Excellence in Cyber Security Education, Research and Cyber Operations.
- New major in Data Science offered jointly with the School of Natural Sciences and Mathematics.

#### Organizational News

- Multiple new positions to be filled in Graphics, Virtual Reality, Vision, Data Science, Software Engineering, Cyber Security, Artificial Intelligence, and Human Computing Interaction (HCI).
- Center for Research in Machine Learning recently founded by Drs. Gogate, Ruozzi, and Natarajan.
- Center for Applied Artificial Intelligence and Machine learning founded by Dr. Doug DeGroot and Dr. Gopal Gupta.
- Center for Women in Cyber Security recently founded by Dr. Bhavani Thuraisingham.

## **New Tenure-Track Faculty**



Dr. Jessica Ouyang **Natural Language** Processing, Automatic Summarization PhD Columbia University



Dr. Kangook Jee AI/Machine Learning, System & Network **Security** PhD Columbia University



Dr. Feng Chen AI/Machine Learning, Big **Data Analytics** PhD VA Tech



Dr. Rishabh Iyer AI/Machine Learning PhD University of Washington



Dr. Kyle Fox Comp. Geometry PhD UIUC, **Postdoc Duke** 

# **DEPARTMENT OF** THE UNIVERSITY OF TEXAS AT DALLAS

# ckPageview'] **Erik Jonsson School of Engineering and Computer Science**

Bachelor of Science in Computer Science

A computer science degree not only prepares students to design and build software but also provides them with the skills to address broad issues such as developing innovative ways to send data over networks. Training in computer science also enables students to work as part of a team in a vast number of areas, including robotics, computer vision and digital forensics.

#### **Careers in Computer Science**

You'll find computer science careers in virtually every industry, from finance to Web design to software development. Computer scientists work on data security, data mining, computer graphics, artificial intelligence, machine learning, virtual reality, game design, animation and biotechnology. What all these computer science careers have in common is the foundation in discrete mathematics. Our curriculum provides this foundation at the start, and we build upon it with an ample selection of courses in the core areas of the discipline.



#### **High School Preparation**

Computer science requires strong high school preparation. A minimum of elementary algebra and geometry should be completed, while trigonometry, calculus, physics and chemistry are highly recommended. Any Advanced Placement courses in computer science or advanced technology are highly beneficial. Solid communication skills are essential since most computer science professionals work as part of a team.

#### **Computer Science at UT Dallas**

One of the largest departments of its kind in the country, the Computer Science Department at UT Dallas features an internationally recognized faculty, more than 4,600 students and a 150,000-square-foot building with modern classrooms and cutting-edge laboratories.

The core of the bachelor's degree curriculum in computer science includes programming methodologies, the analysis of algorithms and data structures and the study of operating systems. The curriculum continues with courses in advanced data structures, programming languages and automata theory, culminating in a challenging project course in which students demonstrate the use of computer science techniques. We also offer a rich choice of application areas, including digital systems design, computer networks, virtual reality, machine learning, embedded systems, computer imaging, artificial intelligence, cognitive modeling and human-computer interaction.

#### Internships and Fast-Track

The Erik Jonsson School operates one of the largest internship and cooperative education programs of its kind, averaging more than 4,600 undergraduate and graduate student placements a year at Dallas-area high-tech companies, including State Farm, Lockheed Martin, AT&T, Fujitsu Laboratories of America, Samsung Electronics, Cisco, Texas Instruments, Intel, Raytheon and IBM.

The Fast-Track Program enables exceptionally gifted undergraduate students to include master's level courses in their undergraduate degree plans. When Fast-Track students graduate with a bachelor's degree, they are automatically admitted to graduate school at UT Dallas. The hours required to complete the master's degree are reduced by up to 15 hours by the number of Fast-Track graduate hours completed.

#### Contact Information

#### Office of Admission and Enrollment

800 West Campbell Road Richardson, TX 75080-3021 Phone: 972-883-2270 or

1-800-889-2443

Email: interest@utdallas.edu Website: utdallas.edu/enroll

#### **Computer Science Undergraduate Program**

Dr. Ovidiu Daescu Phone: 972-883-4196 Office: ECSS 4.907

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Dr. Jorge Cobb

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#### **Computer Science Program**

Erik Jonsson School of Engineering & Computer

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The University of Texas at Dallas 800 West Campbell Road Richardson, TX 75080-3021 Website: cs. utdallas.edu.

For complete admission and degree requirements, view the Undergraduate Catalog at catalog.utdallas.edu

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