1 *Computer science students are members of multi-disciplinary teams that compete at NASA's annual Robotic Mining Competition (formerly known as Lunabotics) held at Kennedy Space Center.* **2** *Looney is an award-winning robot that CS students help program.* **3** *CS students also compete in a RoboSub competition sponsored by the Association for Unmanned Vehicle Systems International (AUVSI) and the U.S. Office of Naval Research (ONR). Designed to advance the development of Autonomous Underwater Vehicles (AUVs), the competition challenges a new generation of computer scientists and engineers to perform realistic missions in an underwater environment.* **4** *As a computer scientist, you will learn skills that provide great career flexibility and are personally valuable.*

GIANFORTE SCHOOL OF COMPUTING
COLLEGE OF ENGINEERING | MONTANA STATE UNIVERSITY

ABOUT COMPUTER SCIENCE

Computer scientists and software engineers use their expertise in computational thinking to advance knowledge and make the world a better place. Recently, the National Academy of Engineering identified 14 Grand Challenges, solutions to which are necessary to solve the formidable challenges facing our generation. Computing will play an important role in developing solutions for all of these interdisciplinary challenges, but is essential to advance personalized learning, reverse-engineer the brain, enhance virtual reality, secure cyberspace, create tools necessary for scientific discovery and improve health informatics.

Because computing is pervasive in today's world, the variety of computing-based careers is limitless. Do you want to develop a mobile app for a non-profit organization? You can do it! Do you want to help create special effects for a movie such as The Hobbit? Why not? Computing careers are only limited by your imagination.

A few specialty areas within our school include algorithm design, artificial intelligence, computational biology, data mining, machine learning, network design, robotics, software engineering and wireless networks. As a student in our school, you will have the opportunity to work with world-class professors on exciting projects that leverage the interdisciplinary nature of computing. For example, students with an interest in robots have the opportunity to compete in annual competitions such as the NASA Robotic Mining Competition at Kennedy Space Center or RoboGames in Silicon Valley.

If you have an interest in computing and want to help invent the future, we invite you to join us!
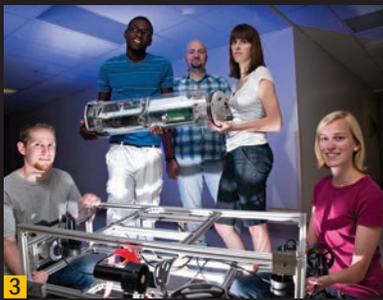
MARKETABILITY

There is a world-wide shortage of computer scientists and this shortage is projected to continue through 2020 and beyond. In Montana last year, demand for computer scientists outstripped the supply of graduates by an 8 to 1 ratio. Consequently, computer science graduates command one of the highest starting salaries of any major — $65,000! If you enjoy computers, the combination of impactful, meaningful careers that are in demand and pay well is a compelling reason to major in computer science.
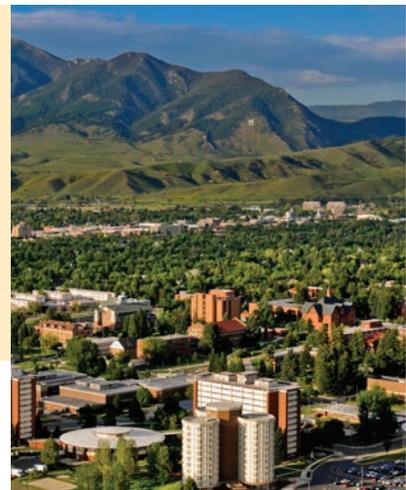
For additional information, contact:

Gianforte School of Computing
Montana State University
357 Barnard Hall
Bozeman, MT 59717

soc-info@montana.edu
Tel: 406-994-4780
Fax: 406-994-6665
www.gsoc.montana.edu

MONTANA STATE UNIVERSITY | College of **ENGINEERING**

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Degree Programs

The Gianforte School of Computing provides degrees at the B.S., M.S. and Ph.D. levels.

Courses include

- Artificial Intelligence
- Compilers
- Computational Biology
- Computer Architecture
- Computer Graphics
- Computer Networks
- Data Mining
- Data Structures and Algorithms
- Database Systems
- Discrete Math
- Machine Learning
- Operating Systems
- Programming Paradigms
- Robot Vision
- Robotics
- Security
- Software Engineering
- Systems Administration
- Web Design

Faculty

- Dr. John Paxton, Director
- Dr. Brittany Fasy
- Dr. Clem Izurieta
- Dr. Indika Kahanda
- Dr. Upulee Kanewala
- Mr. Hunter Lloyd
- Dr. Dave Millman
- Dr. Brendan Mumey
- Dr. John Sheppard
- Dr. Mike Wittie
- Dr. Qing Yang
- Dr. Binhai Zhu

ABOUT MONTANA STATE UNIVERSITY

Founded in 1893 as a Land Grant University, Montana State University (MSU) boasts a friendly, supportive faculty and campus environment. MSU currently enrolls nearly 16,000 students, including 2,000 graduate students. According to the Carnegie Foundation, MSU is the one and only university that (1) primarily serves undergraduate students, (2) encourages service learning opportunities, and (3) supports a high level of research activity. As a student, you will benefit from MSU's unique niche in higher education!

MSU is located in Bozeman, Montana, an extended community of 70,000 nestled in the Rocky Mountains about 90 miles north of Yellowstone National Park. In addition to providing access to extraordinary teaching and research programs, Bozeman is renowned for year-round recreational and cultural opportunities that include access to world class ski areas, multiple blue ribbon trout streams and the Gallatin National Forest. The local airport is served by national airlines and is the busiest airport in the state.

Named an All American City, Bozeman boasts high-quality medical facilities, a very low crime rate, many fine restaurants, acclaimed public and private schools, a symphony orchestra and choir, an annual opera, and nationally known events such as the Sweet Pea Festival of the Arts held in early August.

SCHOLARSHIPS

The Gianforte School of Computing and the College of Engineering both offer scholarships to qualified students. Continuing students typically apply in January for the coming academic year. The school's numerous scholarships are generously provided by industry and alumni;
http://www.gsoc.montana.edu/scholarships.html

INTERNATIONAL OPPORTUNITIES

Learning about the world is rewarding from both a professional and personal standpoint. With planning, a student can earn an international engineering certificate to accompany a Computer Science Bachelor's degree; *http://www.coe.montana.edu/depts_degrees.html*. We also encourage international students to join us; *http://www.montana.edu/international/*

5 MSU's Barnard Hall is home to the School of Computing and is adjacent to the Strand Union Building (SUB). The SUB is a central gathering place where students can find food, the MSU Bookstore, bowling lanes, pool tables, and plenty of spaces to study. **6** Students are inspired by the School of Computing's recently remodeled student center, which provides a contemporary space where they can study and take part in tutoring sessions.

MONTANA STATE UNIVERSITY | College of ENGINEERING