Where are we going?
The Short-Term Vision

- **August 2016**
  - Launch Gianforte School of Computing

- **Spring 2017 and Fall 2017**
  - Celebrate becoming a School of Computing

- **Fall 2017**
  - Offer Computer Science B.A. Degree
    - 300 new majors possible within 3 years!
  - Offer Computer Science Teaching Minor
The Longer-Term Vision

- In 2–5 Years
  - Expand Data Science

- In 5 Years
  - Grow to 1000 CS students

- In 5–10 Years
  - School of Computing Building

- In 15–20 Years
  - Become a College of Computing
Why is this Important?

1,000,000 more jobs than students by 2020

$500 billion opportunity
1.4 million computer jobs
400,000 computer science students

Code.org illustrated the widening gap of computer science students and available computing jobs.
To Better Serve Students

- Offer a broader set of degrees, better serving a larger, more diverse student population.

- For example, a B.A. can serve students who identify with the arts or humanities.

- For example, Data Science can prepare students for in-demand, well-paying careers.
A basic understanding of computing is essential for many careers.

2016 Montana High-Tech Business Alliance Survey Findings:

- Attracting talent and hiring skilled technology workers is the largest impediment to faster growth
- 940 new net jobs will be created in 2016
- Employees earn an average annual salary of $56,800; more than twice the Montana average
Computing is central to MSU’s research

For example, to the state funded $2,000,000 precision agriculture initiative

For example, to the Western Transportation Institute’s rural, autonomous, connected vehicle initiative
Why us?
Why us?

- We are the largest CS program in MT
- Our student population is growing rapidly
- We are connected to MT high schools
- We are connected to the MT software industry
- We are critical to MSU’s research enterprise
- MSU is the state’s premier STEM university
What will it take?
Enrollments

- Fall 2013 MSU CS Majors: 281
- Fall 2014 MSU CS Majors: 317
- Fall 2015 MSU CS Majors: 431
- Fall 2016 MSU CS Majors: 493
- May 2016 Taulbee Survey Average: 604.3

Table B6. Total Bachelor’s Enrollment by Dept.

<table>
<thead>
<tr>
<th>Department Type</th>
<th>Major</th>
<th>Pre-major</th>
<th># Dept</th>
<th>Avg. Major per Dept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>US CS Public</td>
<td>61,039</td>
<td>16,320</td>
<td>101</td>
<td>604.3</td>
</tr>
</tbody>
</table>
Faculty Size

- Fall 2015: 10
- Fall 2016: 11 (12 in Spring 2017)
- Fall 2017: 14 (with 2 hires)
- Fall 2018: 15 (with 1 hire)
- May 2016 Taulbee Survey Average: 34.9
Our Greatest Need

- To be nationally average, the Taulbee Survey shows 28.5 faculty would serve 493 majors.

- 12 faculty serve CS majors in Spring 2017!

- To better serve students, accelerate Montana’s economy and advance knowledge, our most pressing need is personnel.
In general, MSU allocates new faculty lines in response to growth, not in anticipation of it.

We need to get out in front of the demand so that we can serve significantly more students.

Non-state support enables us to create new, high quality opportunities.
Opportunities
Investment Opportunities

- Faculty Support
  - Professorships, Endowed Chairs, Leadership Grants

- Graduate Student Support
  - Fellowships, GRAs, GTAs

- Undergraduate Student Support
  - Scholarships, Travel
Engagement Opportunities

- School of Computing Launch Events
  - Private Dinner: February 17, 2017
  - Public Event: Fall Semester 2017

- Tech Road Trip to Denver Area
  - March 13–17, 2017

- Grace Hopper Celebration of Women in Computing Conference in Orlando
  - October 4–6, 2017
Engagement Opportunities

- Company or individual visits
- Alumni events
- Our LinkedIn Alumni Network has over 690 members
Discussion

- Thank You!