
Steven Lonn
Rachel Niemer
Chris Teplovs
Is scaling an ed tech innovation different than bring another technology to scale?

Discuss the similarities and differences with your neighbor(s)
Today's ed tech innovations in higher ed:
Crossing the "Valley" from Innovation to Infrastructure
The DIG team of Developers
U/X Designer
Behavioral Scientist
Pedagogical Expert

Communities of Practice

Innovators
Users

University IT support at scale

External

DIG

DIG Digital Innovation Greenhouse
@umichDEI
- Began with three analytics-centered tools
- Now grown to six tools at various stages of development
The Digital Innovation Greenhouse: A Lead Developer’s Perspective
Engaging with DIG - Students

• DIG engages with students across U-M in a variety of ways:
  – Student Fellows Program (academic year) and Internship Program (summer) with roles related to:
    • Software development
    • User experience design
    • Graphic Design
    • Analytics
    • Communities of Practice mobilization
  – Open houses
  – Design jams
  – Data hackathons
  – Public code reviews
  – Design charrettes
# Student Fellow Selection Process

- Job Posting
- Initial Review
- Screening Task
- Task Review
- Interview
- Offer
- Acceptance
- Onboarding

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Status</th>
<th>School</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ni</td>
<td><a href="mailto:ni@umich.edu">ni@umich.edu</a></td>
<td>Offer Accepted</td>
<td>SI</td>
<td>Masters - 2016</td>
<td></td>
</tr>
<tr>
<td>Pr</td>
<td><a href="mailto:p@umich.edu">p@umich.edu</a></td>
<td>Interviewing</td>
<td>SI</td>
<td>Masters - 2017</td>
<td></td>
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<tr>
<td>Hr</td>
<td><a href="mailto:hr@umich.edu">hr@umich.edu</a></td>
<td>Hired</td>
<td>SI</td>
<td>Masters - 2016</td>
<td></td>
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<tr>
<td>Si</td>
<td><a href="mailto:si@umich.edu">si@umich.edu</a></td>
<td>Withdrew interest</td>
<td>SI</td>
<td>Masters - 2017</td>
<td></td>
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<tr>
<td>Xi</td>
<td><a href="mailto:xi@umich.edu">xi@umich.edu</a></td>
<td>Screener Not Returned</td>
<td>LSA (Stats)</td>
<td>MA 2017</td>
<td>Rackham orientation</td>
</tr>
<tr>
<td>Al</td>
<td><a href="mailto:al@umich.edu">al@umich.edu</a></td>
<td>Won't Interview</td>
<td>CoE</td>
<td>Undergrad - 2011</td>
<td>Festfall</td>
</tr>
<tr>
<td>Sr</td>
<td><a href="mailto:sr@umich.edu">sr@umich.edu</a></td>
<td>Offer Accepted</td>
<td>SI</td>
<td>Masters - 2016</td>
<td>Jared Tritz; Brooks endorsemer</td>
</tr>
<tr>
<td>Pr</td>
<td><a href="mailto:pr@umich.edu">pr@umich.edu</a></td>
<td>Withdrew interest</td>
<td>Engineering</td>
<td>CS - Sophomore</td>
<td>Festfall</td>
</tr>
<tr>
<td>Je</td>
<td><a href="mailto:jje@umich.edu">jje@umich.edu</a></td>
<td>Offer Accepted</td>
<td>SI</td>
<td>2016</td>
<td>LETSI</td>
</tr>
<tr>
<td>Le</td>
<td><a href="mailto:le@umich.edu">le@umich.edu</a></td>
<td>Screener Returned</td>
<td>SI (Digital Media and Education)</td>
<td></td>
<td>Sidharath Chhatani</td>
</tr>
<tr>
<td>Al</td>
<td><a href="mailto:a@umich.edu">a@umich.edu</a></td>
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<td>SI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si</td>
<td><a href="mailto:si@umich.edu">si@umich.edu</a></td>
<td>Won't Offer</td>
<td>SI</td>
<td></td>
<td></td>
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<tr>
<td>Yt</td>
<td><a href="mailto:yt@umich.edu">yt@umich.edu</a></td>
<td>Won't Offer</td>
<td>SI (1st year)</td>
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<tr>
<td>Rr</td>
<td><a href="mailto:rr@umich.edu">rr@umich.edu</a></td>
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<tr>
<td>Pr</td>
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<td>Interviewing</td>
<td>SI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sr</td>
<td><a href="mailto:si@umich.edu">si@umich.edu</a></td>
<td>Withdrew interest</td>
<td>SI</td>
<td>First Year</td>
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</table>
Student Fellows Work: Software Development

```javascript
'use strict';

/**
 * @ngdoc service
 * @name interfaceApp.backpackapi
 * @description
 * # backpackapi
 * Factory in the interfaceApp.
 */

angular.module('interfaceApp')
  .factory('backpackapi', function($http, $q, d3Promise) {
    // Public API here
    return {
      courses: function() { // All course codes
        var promise = $http.get('api/courses/').then(function(response) {
          return response.data;
        });
        return promise;
      },
    },
  });
```
Student Fellows Work: UX Design
Student Fellows: Paper Prototyping
Student Fellows Work

- Interface prototyping
- Icon design
- User testing
Student Fellows: Hi-Fidelity Mockups

MATH 116: Calculus II

**Grades**
- Median Grade: B

**Enrollment**
- 2011-12:
  - Spring: 732
  - Fall: 600
  - Winter: 500
  - Summer: 320
- 2012-13:
  - Spring: 700
  - Fall: 650
  - Winter: 450
  - Summer: 220
- 2013-14:
  - Spring: 680
  - Fall: 580
  - Winter: 400
  - Summer: 200
- 2014-15:
  - Spring: 650
  - Fall: 500
  - Winter: 350
  - Summer: 150

**Instructors**

- Dorf, Mary Lou
- Dion, Lisa Armelle
- Kendall, Grace Elizabeth
- Merritt, Stephen Robert
- Schmitz, Adam Vincent
- Wolfington, V. William John
- Wurman, Timothy Russell
- Vlach, Carolyn
- Alekja, Maxim
- Bond, Jeremy Gibson
- Brown, David Parker
Student Fellows: Report Writing

Student Explorer Redesign:
Usability Tests and Interviews Analysis

Completed by Jasmine Hentschel
for the Office of Digital Education and Innovation at the University of Michigan

August 11, 2015
Collaboration with Information & Technology Services (ITS)
Collaboration with ITS

● From Day 1!
  ○ Focus on innovation around:
    ■ Deployment
      ● containers
      ● load balancing
      ● horizontal scaling
    ■ User Support
      ● Working with ITS Service Center
        ○ Weekly touch-base meetings and work-togethers
Future Focus Areas for DIG

- Scale educational innovations
- Refine handoff process
- Pursue commercialization
- Expand talent pool
For More Information:

digitaleducation@umich.edu

digitaleducation.umich.edu

#UMichDIG