HIGH TECH, HIGH TOUCH, HIGH IMPACT

NERCES KEVORK KAZANDJIAN, CSU NORTH RIDGE
INTRODUCTION
INTRODUCTION

YOUR HUMBLE ORATOR

Currently

- Staff Mentor and Product Owner of META+LAB
- Division Representative on the campus Web Coordination Group
- Lecturer for the Department of Computer Science

Formerly

- Web Developer for Division of Academic Affairs
- Mentor for the Canoga Park High School First Robotics Competition Team
STORY OF META+LAB
WHAT IS META+LAB

● The Matador Emerging Technology and Arts Lab (META+LAB) is an extension of the academic program that functions as a collaborative startup. Our approach, led by individuals with expertise and those who wish to learn (faculty, staff and students), pushes the tech/entrepreneurial envelope in terms of visual interface design, user experience and application development.

● Our vision is to redefine collaborative learning by inspiring and mentoring students in a space of unrestricted growth. We believe students should have the freedom to engage in experimental projects that will propel their forward progress as creative and critical thinkers.
HOW IS THIS ACCOMPLISHED: INDIVIDUALS

- Staff and Faculty
  - Co-Directors
  - Faculty Affiliates
  - Staff
- Students
  - Explorers
  - Creators
- Miscellaneous
  - Catalysts
STORY OF META+LAB

HOW IS THIS ACCOMPLISHED: PROCESS

- Agile Methodology
  - Sprints
  - Planning
  - Demo
  - Review
  - Retrospective
STORY OF META+LAB

HOW IS THIS ACCOMPLISHED: GOALS

- Pursue growth and learning.
- Seed and foster experimentation.
- Embrace failure as a learning opportunity.
- Collaborate with educators and administrators.
- Establish an environment where anyone can be a mentor.
- Prepare participants for future careers and endeavors.
STORY OF META+LAB

PRECURSORS OF META+LAB

- Academic Affairs Central Web Team
  - Mostly staff
  - Few students
- Pioneering Technology Group
  - Mostly students
  - Few staff
CASE STUDY #1:

ELECTRONIC THESIS AND DISSERTATION (ETD)
A web application designed to replace the thesis paperwork students must file and eliminates the need for students to print and bind copies of their theses.

Student theses are submitted to the library's online repository, ScholarWorks. Once submitted to ScholarWorks, the theses will be available and searchable online.
WHY DOES ETD WORK

- Saves students time and money by allowing them to:
  - work from home and avoid unnecessary trips to campus for thesis paperwork and appointments.
  - avoid bindery fees, expensive stationery, and other costs related to printing.

- Provides faculty with:
  - the flexibility to sign thesis paperwork at their convenience
  - the ability to closely track a student’s workload and progress throughout each step of the student’s thesis process.
WHY DOES ETD WORK (cont.)

Through the online publication of student work:

- student research is more rapidly available to a broader, global audience.
- speed and breadth of the distribution of student research is increased.
- gives students who are just beginning the research process easier access to other student theses.
- students can publish their thesis with multiple media types, ranging from audio and video files to large data sets and computer applications.
### Thesis / Graduate Project Status

<table>
<thead>
<tr>
<th>Step</th>
<th>Status</th>
<th>Deadline</th>
<th>Next Action</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Form</td>
<td>Complete</td>
<td>February 28, 2014</td>
<td>None Required</td>
<td>View Modify</td>
</tr>
<tr>
<td>Protocol Approval</td>
<td>Submit Human Subject Approval Forms (If not yet submitted)</td>
<td>February 28, 2014</td>
<td><a href="#">View Instructions/Forms</a></td>
<td></td>
</tr>
<tr>
<td>Draft Approval</td>
<td>Complete</td>
<td>April 18, 2014</td>
<td><a href="#">View any Required Changes needed in your Final Draft</a>. You do not need to resubmit your preliminary draft.</td>
<td>View Modify</td>
</tr>
<tr>
<td>Final Approval</td>
<td>Awaiting committee signatures</td>
<td>May 9, 2014</td>
<td>None Required</td>
<td>View Modify</td>
</tr>
</tbody>
</table>
TAKE-AWAYS AND IMPROVEMENTS

- Workflow based on original paper format
- Committee members outside CSUN
- Different developers using different conventions
CASE STUDY #2:

ELECTRONIC ASSESSMENT SYSTEM (EAS)
WHAT IS EAS

• A web application that facilitates campus-wide assessment through the systematic collection and interpretation of student competencies throughout their education.
Students are able to upload signature assignments prepared in:
  ○ Gateway classes in the major
  ○ Capstone classes in the major

Faculty are able to use stored assignments for assessment exercises:
  ○ Able to draw random samples
  ○ Assessment based on specially created rubrics

Maintains historical data and makes it more readily available for longitudinal studies
ELECTRONIC ASSESSMENT SYSTEM (EAS)

WHY DOES EAS WORK (cont.)

List of features include:

- Creating Assignments for Specific Sections
- Uploading and Viewing Assignments
- Creating Rubrics
- Creating and Carrying Out an Assessment Study
- Dealing with Outliers
- Extracting Summary Information
ELECTRONIC ASSESSMENT SYSTEM (EAS)

Through the online publication of student work:

○ student research is more rapidly available to a broader, global audience.
○ speed and breadth of the distribution of student research is increased
○ gives students who are just beginning the research process easier access to other student theses.
○ students can publish their thesis with multiple media types, ranging from audio and video files to large data sets and computer applications.

SAMPLE SCREEN
TAKE-AWAYS AND IMPROVEMENTS

- Users gravitating away from same-space discussions
- More report-generating capabilities possible
- Successes and failures using different development frameworks
CASE STUDY #3:

UPPER DIVISION WRITING PROFICIENCY EXAM (UDWPE)
WHAT IS UDWPE

- A web application that is the computer-based version of the Upper Division Writing Proficiency Exam
- Guidelines and policies follow from those established for the traditional, hand-written version of the exam
UPPER DIVISION WRITING PROFICIENCY EXAM (UDWPE)

WHY DOES UDWPE WORK

- Essays, Reading Scores, Reports
  - Maintained within an electronic database with redundancy
- Computer stations can provide additional accessibility
  - Disability Resources and Educational Services (DRES) Exams
- Assessment integration
  - Leveraging EAS
UPPER DIVISION WRITING PROFICIENCY EXAM (UDWPE)

SAMPLE SCREEN

Exams In this Reading
Session #96, Code: 271460
Session #97, Code: 782751
Session #98, Code: 952124
Session #100, Code: 748466
Session #102, Code: 875200
Session #103, Code: 746916

Assessors
Available Reassessors

Essays
Note: CT - Critical Thinking, QL - Quantitative Literacy, IL - Information Literacy

<table>
<thead>
<tr>
<th>Name</th>
<th>English Notice</th>
<th>A1</th>
<th>A2</th>
<th>Assessor 1</th>
<th>Assessor 2</th>
<th>Total</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3, 3, 4, 3</td>
<td></td>
<td></td>
<td>6, 6, 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5, 5, 5, 5</td>
<td></td>
<td></td>
<td>9, 10, 10, 9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5, 5, 4, 4</td>
<td></td>
<td></td>
<td>10, 10, 8, 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4, 5, 4, 5</td>
<td></td>
<td></td>
<td>8, 9, 8, 8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TAKE-AWAYS AND IMPROVEMENTS

- Written format following suit with Assessment
- Refinement of scoring and assessment criteria
- Exporting essays as documents to EAS app
- Exporting score data directly to Admissions and Records
CASE STUDY #4:

FACULTY APP SUITE: PROFILES, STORIES, SCHOLARSHIP
WHAT IS FACULTY

- Profiles
  - Collaboration with Office of the Provost
  - Class schedule and contact information
- Stories
  - Collaboration with Office of Faculty Development
  - Featured stories on selected faculty
- Scholarship
  - Collaboration with Office Research and Graduate Studies
  - Research projects, interests, and expertise
WHY DOES FACULTY WORK

● Profiles
  ○ Gathers institutional data into a single publicly available location while providing some additional features for CSUN faculty.

● Stories
  ○ Highlights faculty members and provides more insight into the lives of CSUN faculty for future applicants and students.

● Scholarship
  ○ Showcases research being conducted by CSUN faculty, as well as making it easier to collaborate across disciplines.
Brief Biography

Nerces joined CSUN in August 2012 as a Web Developer. He is currently one of the staff mentors and Product Owners of META+lab since the unit’s inception in November 2014. He has been a lecturer for the Department of Computer Science since Fall 2013. He is also a division representative on the campus Web Coordination Group.

Research

Research interests are coming soon

Classes

<table>
<thead>
<tr>
<th>Class #</th>
<th>Catalog #</th>
<th>Title</th>
<th>Days</th>
<th>Time (Start-End)</th>
<th>Location</th>
<th>Syllabus</th>
</tr>
</thead>
<tbody>
<tr>
<td>15933</td>
<td>122</td>
<td>Computer Architecture &amp; Asm Language</td>
<td>MoWe</td>
<td>05:00 PM - 05:25 PM</td>
<td>J02214</td>
<td>View Syllabus</td>
</tr>
</tbody>
</table>
SAMPLE SCREENS

--- Back to Stories

QUICK FACTS

Grew up
Ventura County, CA.

Teaching Areas of Interest
Afrocentrism, Social Psychology

Research Areas of Interest
Retention, Faculty of Color in Higher education, Black males in higher education, Student engagement and student success, Racially engaging pedagogy, Athletes in the Community College

During the summers, I plan to...
write my manuscripts and continue to coach basketball to make a difference in the lives of the Northridge youth community.
CAREER: FIRE lab investigation of stress-induced sleep in C. elegans

venue: Despite the fundamental importance of sleep, its function remains controversial. Sleep is recognized to be regulated by conserved genetic mechanisms, and in the past fifteen years the sleep field has expanded to non-mammalian organisms, allowing the application of novel genetic approaches. The objective of this proposal is to creatively and effectively integrate high-impact sleep research in the nematode C. elegans with the education and mentoring of students from groups traditionally underrepresented in science. Methods: The PI has developed an inducible sleep system in C. elegans and is using molecular genetic tools to discover components of sleep regulation. As sleep in C. elegans is defined by simple behavioral criteria, this model system can be effectively navigated by undergraduates. With the aid of a small university grant, the PI redesigned and implemented an upper-division undergraduate laboratory course called BIO460/LFIRE (Full Immersion Research Experience), integrating the educational activities with her sleep research program. In the redesigned FIRE, students from diverse backgrounds produced findings of significance that contributed to a publication(1). They experienced the excitement of performing original research, inspiring at least one minority student to pursue a doctoral degree. This proposal aims to expand on this preliminary success, offering FIRE regularly and providing support for students who wish to continue their research projects while they apply to graduate programs or pursue other bioscience career paths. Intellectual Merit: Sleep is known to be under the influence of circadian and homeostatic processes. While progress has been made in identifying the molecular mechanisms governing the circadian regulation of sleep, our understanding of homeostatic sleep regulation is in its early stages. Current hypotheses for the source of homeostatic sleep pressure are based on various cellular perturbations that occur during wakefulness. However, until recently none of these perturbations had been shown to be capable of promoting sleep. Recent work from the PI’s lab revealed that conditions that cause cellular stress can induce sleep in C. elegans, and that this stress-induced
TAKE-AWAYS AND IMPROVEMENTS

- Collaboration across different units to increased visibility
  - Central IT for Campus Directory and Moodle Classroom Management System
  - Admissions and Records for Class Search
  - Undergraduate Studies for Catalog
  - CSUN Library for ScholarWorks Repository
- Additional features implemented “bottom-to-top”
CONCLUSION
CONCLUSION

EXPLORE. LEARN. GO BEYOND.

- Explore
  - Individuals thrive when they are given an environment where it is safe to fail.

- Learn
  - Individuals have more opportunities to learn in an academic setting when given the opportunity to be creative.

- Go Beyond
  - Individuals with the appropriate support system can find new and better solutions.
“Tell me and I forget, teach me and I may remember, involve me and I learn.”

Benjamin Franklin
Thank You!