The Capstone Experience

Dr. Wayne Dyksen
Department of Computer Science and Engineering
Michigan State University
Fall 2018
Course Goals

• Build a Significant Software System
• Work in a Team Environment
• Learn New Tools and Environments
• Build and Administer Systems
• Develop Communication Skills
• Develop Interview Talking Points
• Consider Issues of Ethics and Professionalism
Course Goals

• Teams of Students
• Build Significant Software System
  ▪ Design
  ▪ Develop
  ▪ Debug
  ▪ Document
  ▪ Deliver
• For Corporate Clients
• In 15 (Short) Weeks
Project Deliverables

• Project Plan Document & Presentation
• Alpha Presentation
• Beta Presentation
• Project Software & Documentation
• Project Video
• Design Day

See Major Milestones.
All-Hands Meetings

• MW, 3:00-4:20 p.m., 1279 Anthony Hall
• Presentations By
  ▪ Professor
  ▪ Teams
    o Status Report Presentations
    o Formal Presentations
      ➢ Project Plan
      ➢ Alpha
      ➢ Beta
    o Project Videos
  ▪ Guest Speakers
All-Hands Meetings

- 08/29: Capstone Overview
- 09/03: (Labor Day, No Meeting)
- 09/05: Project Plan
- 09/10: Team Status Report Presentations
- 09/12: Risks and Prototypes
- 09/17: Schedule and Teamwork
- 09/19: Resume Writing and Interviewing
- 09/24: Team Project Plan Presentations
- 09/26: Team Project Plan Presentations
- 10/01: Team Project Plan Presentations
- 10/03: Team Project Plan Presentations
- 10/08: Creating and Giving Presentations
- 10/10: Team Status Report Presentations
- 10/15: Team Alpha Presentations
- 10/17: Team Alpha Presentations
- 10/22: Team Alpha Presentations
- 10/24: Team Alpha Presentations
- 10/29: Design Day and the Project Videos
- 10/31: Camtasia Demo
- 11/05: Intellectual Property
- 11/07: Ethics and Professionalism
- 11/12: Team Beta Presentations
- 11/14: Team Beta Presentations
- 11/19: Team Beta Presentations
- 11/21: Team Status Reports
- 11/26: Team Beta Presentations
- 11/28: Team Status Reports
- 12/03: Project Videos
- 12/05: Project Videos and All Deliverables
- 12/06: Design Day Setup
- 12/07: Design Day
- 12/11: Project Videos
The Capstone Experience

Team Amazon

Department of Computer Science and Engineering
Michigan State University
Fall 2018
INTERESTING FINDS UPDATED DAILY

YOUR MIX    EXPLORE    YOUR ❤️

FUN

- [Image of a glass bottle]
- [Image of a hanging plant]
- [Image of a crystal]
- [Image of a pink camera]
Team Amazon
Project Overview

AVAST: Amazon Video And Shopping Technology

- Functionalities
  - Leverage Growing Internet Video Watching
  - Market Amazon Products in Contextual and Personalized Ways

- Features
  - Identify Items of Interest in Videos Automatically
    - People
    - Places
    - Things
  - Search for Relevant Amazon Products
  - Display Links to Amazon Product Pages
  - Provide Front-End JavaScript Framework

- Technologies
  - Amazon Web Services (AWS)
    - Rekognition / Komprehend
    - API Gateway
    - Lambda
    - Elastic Compute Cloud (EC2)
    - Command Line Interface (CLI)
    - Product Advertising API
  - JavaScript / React or Angular or Vue
  - Restful Web Services
The Capstone Experience

Team Aptiv

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Team Aptiv
Project Overview

Autonomous Vehicle Fleet Connectivity Apps

• Functionalities
  ▪ Provide Connectivity to Autonomous Vehicle Test Fleet
  ▪ Via Mobile and Web Apps

• Features
  ▪ Enable Scheduling Vehicles for Use
  ▪ Provide Real-Time Access to Vehicle Data (Location, Speed, Current User, Etc.)
  ▪ Handle Various Roles (Drive, Engineer and Manager)
  ▪ Support Web, Android and Apple iOS
  ▪ Integrate Apps Into Existing Aptiv Tool
  ▪ Create Complete Documentation

• Technologies
  ▪ Autonomous Vehicle Technologies
  ▪ Aptiv AMDAS
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
The Capstone Experience

Team Auto-Owners

Department of Computer Science and Engineering
Michigan State University
Fall 2018
For Whatever Lies Ahead

Insurance built around your needs by a local independent agent

FIND AN AGENT FOR A QUOTE

Why choose an independent agent?

Pay Your Bill

Report a Claim

Policies to Meet Your Needs
Team Auto-Owners
Project Overview

Jeffrey: Virtual Insurance Claim Advisor

• Functionalities
  ▪ Simplify Insurance Claim Submission
  ▪ Use Voice Recognition and Natural Language Processing

• Features
  ▪ Provide Easy-To-Use Voice Interaction
  ▪ Handle Various Roles
    (Policyholder, Agent, Auto-Owners Associate)
  ▪ Handle Various Claims
    (Home and Auto)
  ▪ Build
    o Mobile Interface for Policyholders
    o Web Interface for Agents and Auto-Owners Associates
  ▪ Utilize GPS for Detecting Location
  ▪ Enable Uploading of Images and Video
  ▪ Format and Submit to Claim System
  ▪ Send Confirmation Messages

• Technologies
  ▪ Natural Language Processing (NLP)
  ▪ Image and Video Processing
  ▪ Global Positioning System (GPS)
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
The Capstone Experience

Team Dow

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Dow Innovation Leads the Way

We’re making vehicles safer, lighter, more efficient and more durable.

PLAY VIDEO
Team Dow

Project Overview

Assist IT: Mobile IT Help Assistant

• Functionalities
  ▪ Provide IT Assistance to Dow Employees
  ▪ Adjust Dynamically Around Conversation
  ▪ Via Mobile and Web Apps

• Features
  ▪ Provide Natural Language Interface
  ▪ Adjust Content to Maximize Accuracy
    - Apply Machine Learning (ML)
    - Leverage Crowdsourcing
  ▪ Leverage Dow’s Existing Knowledge Base
  ▪ Scale to 80,000 Employees Worldwide
  ▪ Support Web, Google Android and Apple iOS

• Technologies
  ▪ Microsoft Azure
    - Language Understanding Intelligence Service (LUIS)
    - Machine Learning Services (ML)
    - Voice Assistants
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
The Capstone Experience

Team Ford

Department of Computer Science and Engineering
Michigan State University
Fall 2018

From Students…
…to Professionals
Make Your Ride, Your Ride.

2019 MUSTANG

VIEW ALL CARS
Team Ford
Project Overview

Ford Customer App Review Dashboard

• Functionalities
  ▪ Summarize Customer Reviews of Ford Apps
  ▪ Generate Sentiment Analysis Dashboard

• Features
  ▪ Fetch Reviews from Google Play Store and iTunes
  ▪ Categorize Reviews Using Sentiment Analysis
  ▪ (From Very Negative to Very Positive)
  ▪ Visualize Sentiment Analysis via Dashboard
  ▪ Cascade Review Summaries to Slack Channel
  ▪ Provide Administrative Portal
  ▪ Create Full Stack of Microservices

• Technologies
  ▪ Java / Spring Framework
  ▪ Python Natural Language Toolkit
  ▪ Slack
  ▪ HTML5
  ▪ RESTful Web Services

Dearborn, Michigan
The Capstone Experience

Team Herman Miller

Department of Computer Science and Engineering
Michigan State University
Fall 2018
The Evolution of Comfort
A new seating experience from Studio 7.5

Meet Cosm
Team Herman Miller
Project Overview

Material Normalization Using Computer Vision

• Functionalities
  ▪ Simplify Office Furniture Ordering
  ▪ Standardize (Normalize) Order Material Data
  ▪ Reduce Customer Requests
  ▪ Offer Alternative Recommendations

• Features
  ▪ Ingest New Materials Requests From Customer Orders
  ▪ Apply Computer Vision
    o Inspect
    o Categorize
    o Tag
    o Approve Or Decline
  ▪ Recommend Nearest Approved Alternative When Declined
  ▪ Support Various Herman Miller Systems via Open Framework
  ▪ Be Trainable, Scalable and Flexible

• Technologies
  ▪ Machine Learning / Deep Learning
  ▪ Python
  ▪ TensorFlow (Image Recognition)
The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Fall 2018
our biggest back to school sale. ever.

25% off backpacks

Shop Now
Team Meijer
Project Overview

Meijer Shrink Reduction Using Blockchain

• Functionalities
  ▪ Reduce Product Waste and Loss
  ▪ Track and Control High Waste and Loss Items

• Features
  ▪ Capture Essential Product Data
  ▪ Select and Implement Tracking Mechanism
  ▪ Establish Trigger/Alert Mechanisms
  ▪ Ensure Proper Movement of Products
  ▪ Get Close-Dated Products For Sale Quickly
  ▪ Identify Recalled Products
  ▪ Store Data in Blockchain

• Technologies
  ▪ Microsoft
    ▪ .NET Framework (C#, ASP.NET)
    ▪ Azure
      ▪ Notification Services
      ▪ Mobile Services (Both iOS and Windows)
    ▪ Application Insights
    ▪ Visual Studio Team Server
  ▪ Microsoft Azure or IBM Blockchain Tools
  ▪ Meijer Web Services
  ▪ Bluebird Android Devices
  ▪ SQL Server / MongoDB

Meijer Shrink Reduction Using Blockchain

Project Overview

Team Meijer
Grand Rapids, Michigan
The Capstone Experience

Team Michigan State University

Department of Computer Science and Engineering
Michigan State University
Fall 2018
DISCOVERING THE GOLD STANDARD OF CANCER DRUGS

MORE
Navigating MSU’s Campus Using Augmented Reality

• Functionalities
  ▪ Provide Assistance Navigating MSU’s Campus
  ▪ Leverage Augmented Reality (AR) on Mobile Devices

• Features
  ▪ Use Mobile Device Camera
  ▪ Overlay Information About Surroundings
    ○ Building Name (Engineering, Wilson Hall)
    ○ Points-of-Interest (Sparty, The Rock)
  ▪ Provide 3D Wayfinding Instructions
  ▪ Give Self-Guided Tours
  ▪ Utilize MSU’s Campus ArcGIS Instance
  ▪ Support Google Android and Apple iOS

• Technologies
  ▪ Apple iOS / Swift / ARKit
  ▪ Google Android / Kotlin / ARCore
  ▪ ArcGIS
The Capstone Experience

Team Microsoft

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Impact your world

Your ideas can create an impact. And we're here to help make yours possible. #EmpowerPossibility

SUBMIT YOUR IDEA NOW

SUBMIT AT A LOCAL STORE
Team Microsoft
Project Overview

ITPro Company Portal

- Functionalities
  - Expand Functionality of Microsoft’s Intune Portal
  - Enable IT Professionals (ITPros) to Use Intune
    - Directly
    - From Mobile Devices

- Features
  - Extend Fall 2017 Capstone Project
  - Get/Set InTune Settings by ITPros
  - Leverage Microsoft Graph
  - Apply Google Jetpack Standards
  - Scale to Support Millions of Users Worldwide

- Technologies
  - Microsoft Graph
  - Google Android
  - Java
  - RESTful Web Services
The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Fast for good.

2x the speed. Built-in privacy protection. Powered by Mozilla.

There's a better way to browse.
Asynchronize All the (Localization) Things!

- **Functionalities**
  - Present Messages to Firefox Users (e.g. “You are about to close 10 tabs.”)
  - “Localize” Messages to Support
    - Multiple Operating Systems
    - 98 Languages
    - Hundreds of Millions of Users Worldwide

- **Features**
  - Integrate into Single Firefox Download
  - Eliminate Need for Special Builds of Firefox
  - Support Restartless “Localization” (Restartless Language Switching)
  - Convert Synchronous Code to Asynchronous Code
  - Leverage Mozilla’s New Fluent System
  - Deliver Code Ready to Ship with Firefox

- **Technologies**
  - Firefox Code Base (~ 51M Lines)
  - CSS
  - C++ / JavaScript
  - XUL / XBL / HTML
  - Fluent
  - Document Type Definition (DTD)
  - Mercurial
  - IRC Cloud
  - Bugzilla
  - Phabricator
  - Microsoft Windows, Apple macOS and Linux
The Capstone Experience

Team MSUFCU

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Michigan State University Federal Credit Union
Building Dreams Together
Team MSUFCU
Project Overview

Transaction Anomaly Detection

• Functionalities
  ▪ Visualize MSUFCU Members’ Spending Habits
  ▪ Send Alerts About Unusual Account Activity

• Features
  ▪ Identify Member Account Anomalies
  ▪ Apply User-Created and MSUFCU-Created Rules
  ▪ Leverage Machine Learning and Data Science
  ▪ Send Alerts Via SMS, Push Notifications or Email
  ▪ Build Card-Based Member-Facing Module
  ▪ Support Web, Google Android and Apple iOS
  ▪ Integrate with MSUFCU’s Existing Systems
  ▪ Apply Anti Money Laundering (AML) Rules
  ▪ Provide Companion Administrative Web Portal

• Technologies
  ▪ CSS / HTML / PHP / JavaScript
  ▪ JSON
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
  ▪ SQL Database
The Capstone Experience

Team Proofpoint

Department of Computer Science and Engineering
Michigan State University
Fall 2018
JOIN US AT PROOFPOINT PROTECT 2018

LEARN MORE
Team Proofpoint
Project Overview

Improved Detonation of Evasive Malware

• Functionalities
  ▪ Protect Users from Malware Threats
  ▪ Counter Evasive Malware Techniques

• Features
  ▪ Enhance Existing Malware Technologies
  ▪ Identify and Block Malware Evasive Behavior
  ▪ Modify Malware Execution
  ▪ Extract Valuable Attributes

• Technologies
  ▪ Cuckoo (Malware Sandboxing)
  ▪ Suricata (Intrusion Detection System)
  ▪ Operating Systems and Compilers
  ▪ Reverse Engineering
  ▪ Python / JavaScript
  ▪ MySQL
The Capstone Experience

Team Quicken Loans

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Introducing


RateShield Approval™ Either Way, You Win!

Buy Your Home Using the New Power Buying Process™
Team Quicken Loans
Project Overview

Walter, You Gotta Go

- Functionalities
  - Integrate Legacy Apps With Modern Versions
  - Automate Legacy Apps Processes With Virtual Worker
- Features
  - Leverage Robotic Process Automation
    - Screen Scraping
    - Machine Learning / Artificial Intelligence
  - Create “Legacy” App (Walter)
    - Used for Loan Application Process
    - Receives Information and Documents
  - Write Modern Replacement App (Lindsey)
  - Implement Centralized Database (Leroy)
  - Provide Web Service (Roger)
  - Create Virtual RPA Worker (Debra)
- Technologies
  - Robotic Process Automation (RPA)
  - Microsoft
    - Azure / Azure SQL
    - C# / Visual Studio
    - .NET WinForms
    - ASP .NET Core
  - GraphQL
  - CSS / HTML / PHP / JavaScript

Walter
Lindsey
Debra
Roger
Leroy

Quicken Loans
Engineered to Amaze
Detroit, Michigan
The Capstone Experience

Team Spectrum Health

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Spectrum Health Virtual Reality Experience

- Functionalities
  - Visualize and Annotate Spectrum Health Facilities
  - Answer Questions for Patients and Family Members
  - Use Virtual Reality (VR)
- Features
  - Build Web-Based Virtual Reality App
  - View 360-Degree Media Using VR Googles
  - Provide Explanations via Annotations
    - Cafeterias
    - Visitor Elevators
    - Aspects of a Hospital Room
    - Tools in a Procedure Room
  - Configure Media Based on User Interaction
  - Provide Companion Administrative Web Portal
- Technologies
  - CSS / HTML / PHP / JavaScript
  - A-Frame
  - ASP.NET Core (C#)
  - Entity Framework Core
  - Microsoft Azure
  - Microsoft SQL Server
The Capstone Experience

Team TechSmith

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Introducing Camtasia 2018
The fastest way to create professional-looking videos.
Team TechSmith
Project Overview

TechSmith Video Review and Slack Integration

• Functionalities
  ▪ Connect Video Authors with Video Reviewers
  ▪ Use Team Messaging Systems

• Features
  ▪ Integrate TechSmith’s Video Review with Slack
  ▪ Provide Interface for Video Author
    o Receive Notification of New Slack Comments
    o Read Slack Comments on Video Review Site
    o Manage Reviews
      ▸ See Existing Reviews
      ▸ Create New Reviews
      ▸ Assign New Slack Users to Reviews
  ▪ Provide Interface for Video Reviewer
    o See Existing Reviews
    o Launch Video Review Site
    o Playback Video with Slack Interface
    o Provide Annotation within Slack
  ▪ Support Other Team Messaging Systems

• Technologies
  ▪ CSS / HTML / PHP / JavaScript
  ▪ TechSmith Video Review API Proxy
  ▪ Microsoft C#/.Net Core
  ▪ Slack App / Slack SDK
  ▪ RESTful Web Services Using Swagger
The Capstone Experience

Team Union Pacific

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Building America for more than 155 years by serving customers, communities and shareholders with a passion for performance, high ethical standards and teamwork.
Augmented Reality Mechanic Training

• Functionalities
  ▪ Train Union Pacific Mechanics Safely
  ▪ Use Augmented Reality (AR)

• Features
  ▪ Show Holographic Images of Railroad Equipment
  ▪ Demonstrate Standard Repair Operations
  ▪ “Match” Holograms with Physical Objects
  ▪ Use Microsoft Hololens
  ▪ Generate Accurate Holograms from CAD Data

• Technologies
  ▪ Microsoft Hololens
  ▪ Unity Game Engine
  ▪ PiXYZ Plugin
  ▪ Vuforia Plugin
The Capstone Experience

Team United Airlines

Department of Computer Science and Engineering
Michigan State University
Fall 2018
Team United Airlines
Project Overview

Tooling Kit Content Verification System

• Functionalities
  ▪ Verify Aircraft Tooling Kit Contents
  ▪ Use Mobile Device Camera

• Features
  ▪ Build Database of Complete Kits
    o List of Contents
    o Images of Contents
    o Barcodes and RFID Tags
  ▪ Support Mobile Device Cameras
  ▪ Apply Computer Vision
    o Compare Image Taken to Image Stored
    o Determine Kit Completeness
  ▪ Send Notifications
    o Incomplete Kits
    o Missing Tools
  ▪ Provide Companion Administrative Web Portal

• Technologies
  ▪ Computer Vision
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
  ▪ SQL Database
The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Fall 2018

From Students…
…to Professionals
EVERYONE HAS AN OPINION. We have SCIENCE.

Since the day we started, we’ve been a force for change. We started with a problem to solve. We scrutinized it, developed a theory, tested it and applied the solution. And we have the same approach today; we listen to our clients’ needs and find a solution. We’re curious, objective, empirical and determined. Through this spirit, we invented The Power of 4™ formula to bring scientific discipline to the business world. It’s how we are Guiding Business Through Science.
Team Urban Science
Project Overview

VIN-Verse

• Functionalities
  ▪ Display Information About Specific Vehicle Identification Number (VIN)
  ▪ Aggregate Data About a Class of VINs

• Features
  ▪ Provide Web and Mobile Apps
  ▪ Enter VIN Using Keyboard or Mobile Device Camera
  ▪ Give Detailed History of VIN’s Life
  ▪ Build Real-Time Authorization Mechanisms
    □ Dealers
    □ Independent Repair Facilities (IRFs)
    □ Owners
  ▪ Protect Vehicle Owner’s Privacy
  ▪ Crawl Google Reviews or Yelp

• Technologies
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Angular JS
  ▪ Microsoft
    □ C# / ASP.NET Core
    □ SQL Server
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
  ▪ Firebase
The Capstone Experience

Team Volkswagen

Department of Computer Science and Engineering
Michigan State University
Fall 2018
The all-new Arteon.
Modern art you can really feel.

MEET ARTEON
Team Volkswagen
Project Overview

VW Car-net Demo App

• Functionalities
  ▪ Change the Habits of Car Dealers
  ▪ Communicate the Value of Car-Net

• Features
  ▪ Target VW Dealers and Customers
  ▪ Create Car-Net Demo / Guided Tour
  ▪ Be Easy and Fun to Use
  ▪ Demonstrate End-to-End User Experience
  ▪ Support Google Android and Apple iOS
  ▪ Support Integration of Video and Product Content

• Technologies
  ▪ Car-Net
  ▪ Apple iOS / Swift
    o AVAudioSession and AVPlayer
    o URLSession and Codable
    o NSNotifications
  ▪ Google Android / Java or Kotlin
    o MediaPlayer and MediaController
    o OkHttp and Retrofit
    o Event Bus
The Capstone Experience

Team Whirlpool

Department of Computer Science and Engineering
Michigan State University
Fall 2018
When dinner can’t wait — and he can’t either

Control the brand new Smart Range from anywhere, so life doesn’t revolve around your range.

See What’s New
Team Whirlpool
Project Overview

Image Recognition Annotation and Validation

• Functionalities
  ▪ Annotate and Validate Images of Recipe Ingredients
  ▪ Apply Crowdsourcing and Gamification
  ▪ Target Whirlpool’s Yummly App

• Features
  ▪ Ingest and Annotate Images
    o Via Mobile Apps
    o Validate Annotations as Actual Ingredients
    o Identify Bounding Boxes
    o Detect and Report Poor Lighting
  ▪ Create Image Validation Game
    o Via Mobile Apps
    o Validate Annotations via Crowdsourcing
    o Track User Participation and Accuracy
    o Create Variety of User Experiences
    o Show Leaderboard
  ▪ Support Google Android and Apple iOS
  ▪ Provide Companion Administrative Dashboard

• Technologies
  ▪ CSS / HTML / PHP / JavaScript
  ▪ Apple iOS / Swift
  ▪ Google Android / Java
  ▪ TensorFlow (Image Recognition)
  ▪ Amazon S3 or Google Cloud Datastore
The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2018
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
The Capstone Experience Lab
View of Spartan Stadium
The Capstone Experience

Design Day Award Winners

December 8, 2017
All-Hands Design Day, April 28, 2017
Auto-Owners Exhibition Award
Team TechSmith, Spring 2017
Teacher’s Virtual Toolbelt
Alex Crimin, Zeke Zandbergen, Yang He, Ryan Cornillie
Presented by Scott Lake of Auto-Owners Insurance
MSU Federal Credit Union Praxis Award
Team Union Pacific, Spring 2017
Learning New Train Routes
Matthew Schleusener, Kangjie Mi, Nick Summers, Jon Wild
Presented by Liam Petraska of MSU-Federal Credit Union
TechSmith Screencast Award
Team Amazon, Spring 2017
ACRA: Amazon Customer Review Analyzer
Jie Wan, Jason Liu, Ian Whalen, Ankit Luthra, Tess Huelskamp
Presented by Wendy Hamilton of TechSmith
Urban Science Sigma Award
Team Michigan State University, Spring 2017

CATAlyst: Mapping CATA Buses in Real-Time
Charlie Ward, Cathy Dinsmoor, Tom Beaver, Jimmy Mkude, James Dodge
Presented by Linda Koepppe and Luke Mercier of Urban Science
Auto-Owners Exhibition Award
Team Phoenix Group, Spring 2018
Customer Service System with Chatbot
Aman Goshu, James Finch, Sarah Fillwock, Dan Shumaker, Fatema Alsaleh
Presented by Ross Hacker and Scott Lake of Auto-Owners Insurance
MSU Federal Credit Union Praxis Award
Team Amazon, Spring 2018
AMPED: Amazon Marketplace Podcast Earnings Detection
Zach Whitener, Cam Korzecke, Chess Luo, Dillon Stock, Hansheng Zhao, Hanzhong
Presented by Ben Maxim of MSU Federal Credit Union
TechSmith Screencast Award
Team Quicken Loans, Spring 2018
Fundamenta: Trust in New Home Construction
Riley Annis, Jaiwant Bhushan, Vishal Adusumilli, Turner Anderson, Erin O'Hara
Presented by Wendy Hamilton of TechSmith
Urban Science Sigma Award
Team Herman Miller, Spring 2018
Adjust: Augmented Reality Chair Adjustment Assistant
Kyle Kinsey, Han Huang, Jacob Weber, Kevin Gaban, Mike Bremiller
Presented by Elizabeth Klee, Nik Steel and Andrea Michaud of Urban Science
The Capstone Experience

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Department of Computer Science and Engineering
Michigan State University
Spring 2018
Auto-Owners
INSURANCE
LIFE • HOME • CAR • BUSINESS
Michigan State University Federal Credit Union
Building Dreams Together
proofpoint