Preparing the Next Generation of Agile Software Engineers: UW-Madison

UW-Madison's Computer Science Capstone w/ Associated Bank

Amber Field, Lecturer @ UW-Madison & VP of Software Development @ Singlewire Software

Steve Lueck, SVP Director of Data Management @ Associated Bank

Have you ever…

- Wished you could try out 8-10 students for a semester for approx. the price of one summer development intern?

- Wanted more exposure to graduating Seniors at UW-Madison?

- Had a project you just couldn't get on the roadmap?

- Wished more of your developers came out of school with relevant agile software development experience?

- Wanted to know more about a college hire before you hired them?

- Wished your developers knew more about product discovery?

Enter UW-Madison's Computer Science Capstone Program

Introductions

Amber Field

Lecturer @ UW-Madison
(Developed and Teaches
UW-Madison's Capstone
Class)

VP of Software
Development

Singlewire Software

Steve Lueck

SVP Director of Data
Management @
Associated Bank

Capstone Project
Sponsor, Fall 2022

How Does the Class Work?

- Partner with Corporate & Non-profit partners
  - Project
  - 2-3 Mentors
  - Donation to UW-Madison
- Two teams of 4-5 students each
  - Mix of Computer Science, Data Science, Product Management MBAs, and UX Masters students
- Both teams work on the project all semester
- Lectures and coursework are focused on real-world agile collaboration

Topics Include

- Discovery
  - Lean Start-up / Design Thinking
  - Customer Interviews
  - Google Design Sprints
- Delivery
  - Scrum
  - Kanban
- Guest Speakers
  - Clean Coding
  - DevOps
  - Product Management @ Amazon
  - & More

Associated Bank Householding Project

- Develop an API driven Householding model to better segment our customers and create more personal experiences.
  - Current legacy solution looking to be modernized and more customizable with rules than COTS solutions

- Large turnout, so broke into 2 teams of students
  - This allowed us to give the students more flexibility and freedom and almost created a healthy competition amongst them

- 1 Principal Lead from our team
  - Engineering oversight, architecture guidance, overall support and mentorship

Project Benefits

- Workable code
  - We were delivered solutions that we can continue to build on and leverage in our environment.

- Creativity in solutions
  - The mix of students and the ideas it generated allowed them to add creativity. One team built a UI / Management interface as a front end which was outside the scope of the ask, but a great add / use case

- Ability to work with great students and understand their skills and abilities
  - The mix of students and abilities allowed the students the ability to collaborate. We also had clear leaders evolve and showcase their abilities to guide their teams with technical leadership and oversight.

More benefits!

- Career fairs outside of the Capstone project

- Offers out to several candidates that we have met along the way

- Great experience for our Principal Engineer to get experience leading teams

- Speaker opportunities

Keys to Success

- The right project idea
  - Think product
  - Cross functional in nature to leverage mix of skills

- Packaged environment, data sets, coding platforms
  - Ensure an insulated "lab" setting is available and prepped so the teams can hit the ground running

- Mentor commitment
  - Be flexible and available for the students…and remember they are students

How to Get Involved

- We still have a couple of slots for partners in fall & spring 2023-2024!

- Guest Speakers

- Mentors

Partners Get

- Great insight into the abilities of the students on their teams

- Recruiting access to all students in the class

- Students who understand your organization!
  - Many partners hire directly from the class

- Connections with Faculty & Staff

What does it take to be a partner?

- Project Idea Brief
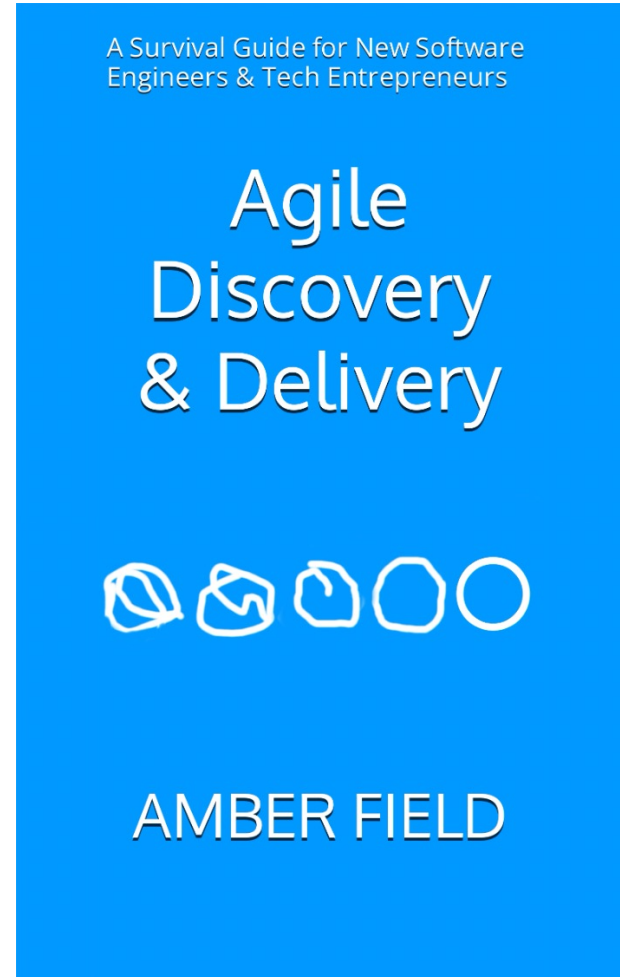- 2-3 Mentors who spend 1-2 hours each with their teams each week
- Donation to UW-Madison

What if I know someone that should take this course, but can't?

Shameless Plug

Agile Discovery & Delivery: A Survival Guide for New Software Engineers & Tech Entrepreneurs

Book comes out in July!

Be notified when the book is available: https://amberrfield.com/contact/

Thank you!!

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