



**17-356/17-766
SOFTWARE ENGINEERING
FOR STARTUPS**



Carnegie Mellon University
School of Computer Science

Michael Hilton & Heather Miller

Michael Hilton

Teaching Professor at CMU
9 years at DoD
9 months as engineer at startup



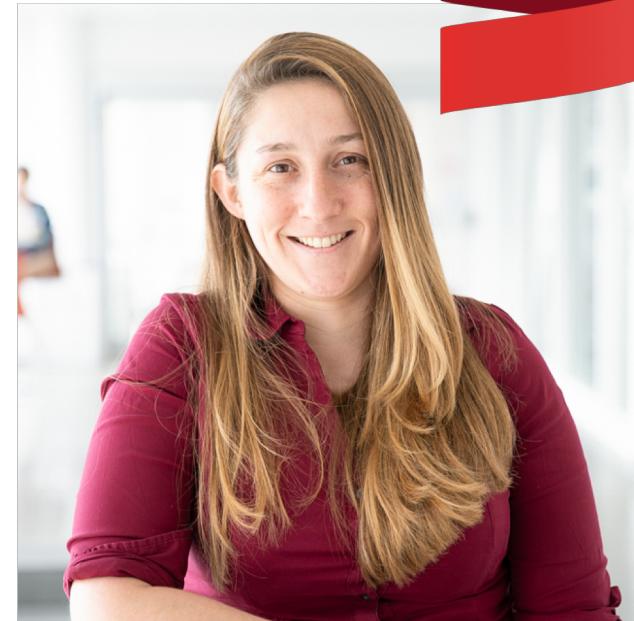
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Heather Miller

Assistant Professor at CMU

- 2 years as the founder of a startup-ey non-profit focused on sustaining open source Scala
- 4 months at Databricks
- years contracting for various startups



TA



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Office Hours/Location: TBA

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No Smoking



Software Engineering for Startups

Our Startup definition: A company without
an empirically validated business plan.

Our Values for this class

Realistic

Useful

Principled

Sustainable

Fun

This class is a startup

One of the only classes of its kind (2nd time we've run it)

There will be more uncertainty with this class than usual

We will be asking you for feedback along the way

Class Structure

Lectures

Guest Speakers

Recitation

Midterm

Homeworks

Final Project

Weekly reports



Survey

Help us understand more about you.
Please fill out teamwork survey in the
teamwork section of the syllabus.

User Stories

Agile method doing requirements analysis.

Each user story represents a conversation between a developer and a stakeholder

Lighter weight than other techniques

User Stories

Stakeholders should write them (or at least understand them).

User the simplest tools (or no tools at all).

Remember non-functional requirements.

Indicate the estimated size.

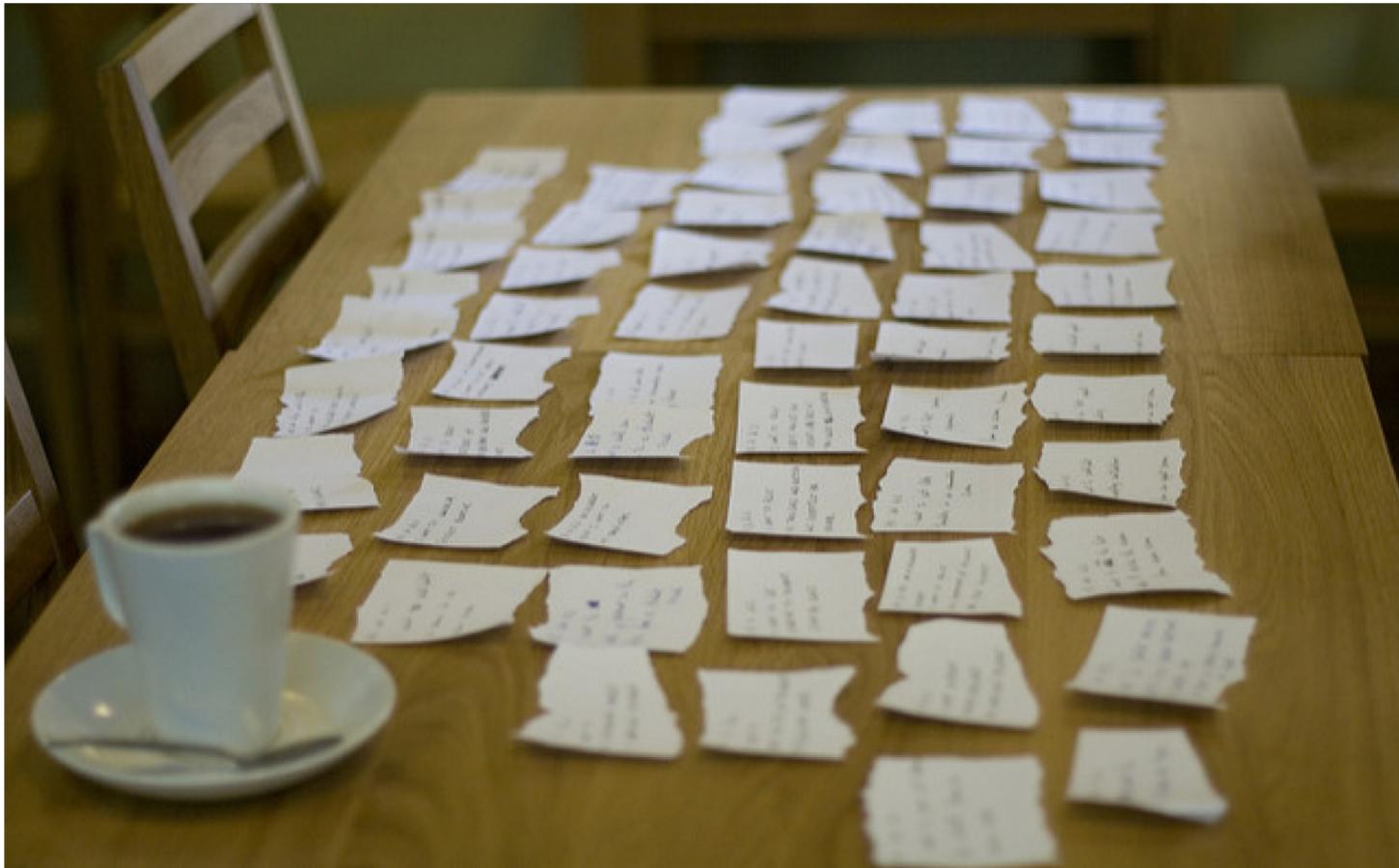
Indicate the priority.

Break down “epic stories” into smaller user

stories

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User Stories



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Img source: <https://flic.kr/p/5a5d3b>

The three C's

Card

“As a <user>, I want <feature>, so that <benefit>”

Conversation

Details needed to implement

Confirmation

How we will know we are done

User Story Benefits

User stories keep the focus on the user
Emphasize delivering value to the user
User stories keep everyone on the same page
Easy to work with

Backlog

List of known tasks or features needed for a project

Collection of user stories