



October 9, 2017  
Week 8, Class #21  
Learning

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MWF – 10:00-11:30 - Kepner 0095F

# This Week – Technology



## ✧ Monday, 10-9

- Lecture – Learning

## ✧ Wednesday, 10-11

- Lecture – Frameworks

## ✧ Friday, 10-13

- Lecture – Dev Tools

Next Week

Design

# Essential Project Planning

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## ✧ Constraints

- Time, Money, Features

## ✧ Milestones

- Four Essential Phases

## ✧ Features

- 4-5 Essential Features

## ✧ Velocity

- When will we be done

# Project Planning Exercise

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- ✧ Base new project plans on previous ones
- ✧ 90% Overlap – high chance of leverage
- ✧ Review WordPress Lite project plan

# World Press Constraints

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- ✧ Time -- April 1, 2018
- ✧ Function -- WordPress lite
- ✧ Money --  $\$10K * 6 \text{ months} * 5 \text{ people} = \$300K$

# World Press Milestones

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## ✧ Phase 1 -- **Prototype** (crawl)

- Proof of concept - all key tech
- Dec 1, 2017 - \$100K

## ✧ Phase 2 -- **Minimum Viable Product** - MVP (walk)

- Essential features only
- Feb 1, 2018 - \$100K

## ✧ Phase 3 -- **Fully Viable Product** - FVP (run)

- Important features only
- April 1, 2018 - \$100K

# World Press Features

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- ✧ User Registration
- ✧ Article Authoring
- ✧ Article Display
- ✧ Hosting

# User Registration

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- ✧ Sign up new user
- ✧ Login and page security
- ✧ Profile
- ✧ Delete user



# Article Authoring

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- ✧ Create article
- ✧ List article
- ✧ Edit article
- ✧ Delete article

# Article Display

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- ✧ Present articles to readers
- ✧ Display one article
- ✧ News feed
- ✧ News sign up

# Hosting

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- ✧ Account at Amazon Web Services (AWS)
- ✧ Deployment process and scripts
- ✧ Version control
- ✧ Database

# Why essential planning works

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- ✧ Covers the essential thinking
- ✧ Can produce the needed format
  - Microsoft project
  - Gant chart
  - Scrum backlog
  - UX - User Stories
  - External Reference Specification

# Sprint Product Backlog



- ✧ User Registration system
- ✧ Sign up new user
- ✧ Login and page security
- ✧ Profile
- ✧ Delete user
- ✧ Article Authoring system
- ✧ Create article
- ✧ List article
- ✧ Edit article
- ✧ Delete article
- ✧ Article Display system
- ✧ Present articles to readers
- ✧ Display one article
- ✧ News feed
- ✧ News sign up
- ✧ Hosting system
- ✧ Account at AWS

# Learning

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- ✧ Learning is an engineer's superpower
- ✧ Dreyfus model
- ✧ Skill Inventory

# Dreyfus Model for Learning New Skills

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- ✧ **Novice** - More than 1 hour
  - Buzz words
- ✧ **Beginner** - More than 10 hour
  - Follow the recipe
- ✧ **Competent** - More than 100 hour
  - Debug basic problems
- ✧ **Proficient** - More than 1,000 hour
  - Build recipes
- ✧ **Expert** - More than 10,000 hour
  - Intuition

# Learning

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## ✧ Skill Inventory

- Select the seven most important technologies
- Quantify your hours of practice
- Identify your desired level

## ✧ Learning Agenda

- Pick 7 Technologies
- Identify 4-7 Tricks in each category
- Plan to invest time to grow



# Classroom vs. Workplace Learning

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- ✧ Learning is the engineer's superpower
- ✧ One college class = 100 hours
- ✧ One month of full-time work = 100 hours

X



✧ X

✧ Y