Introduction

Nick Matthews
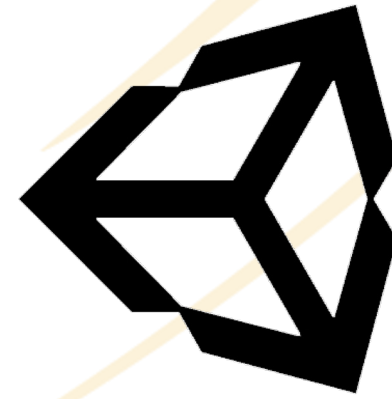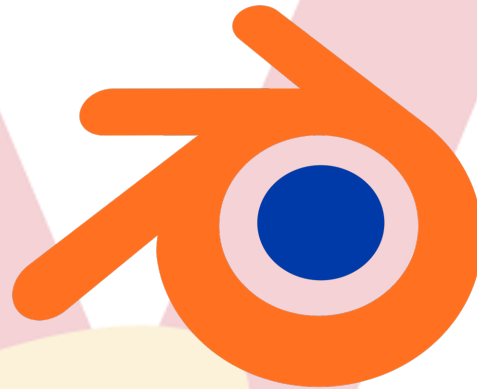
Adam Kohl

First things first

- What are your expectations for this internship?

- What do we hope from your internship?

  - Have fun (in AND out of the lab)

  - Learn and apply useful technologies in a research setting
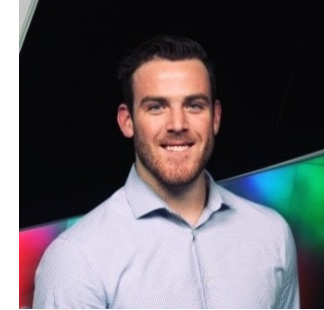
  - Get rid of any fears for graduate school

Fundamentals (Week 2 – 4)

- Learning & building upon technologies
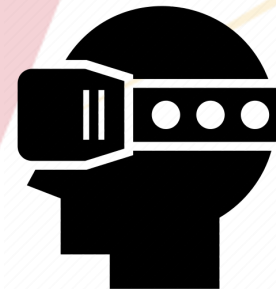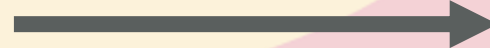
Deeper Dives (Weeks 4 – 5)

⊙ Machine learning

⊙ Additive Manufacturing

⊙ Extended Reality

Major Course Project (MCA) (Weeks 5 – 6)

- Project based on everything you've learned

- Gather ideas along the way

- Choose topics for the MCA (within the deeper dive) by June 19th

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Calendar

	Time Slot	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
		May 27 - 31	June 3 - 7	June 10 - 14	June 17 - 21	June 24 - 28	July 1 - 5	July 8 - 12	July 15 - 19	July 22 - 26
Mon	9 - 11 am		C++	Solidworks	Unity	Deeper dive topics	MCA Work	Craft of Research Session 6		
	11 - 12 pm									
	2 - 4 pm		C++	Solidworks	Unity	Deeper dive topics	MCA Work			
Tues	9 - 10 am		Craft of Research Session 2	Craft of Research Session 3	Craft of Research Session 4	Craft of Research Session 5				
	10 - 11 am						Intro to HCI Session 3			
	11 - 1pm									
Wed	9 - 11 am		C++	Solidworks	Unity	Deeper dive topics + MCA work	MCA Work			
	10 - 11 am							Ethics Session 1	Ethics Session 2	Ethics Session 3
	2 - 4 pm		C++	Blender	Unity & Choose deeper dive topics	MCA Work	MCA Presentations			
Thurs	9 - 10 am									
	10 - 11 am			Intro to HCI Session 1		Intro to HCI Session 2		Intro to HCI Session 4	Intro to HCI Session 5	
	2 - 3 pm	Craft of Research Session 1								
Fri	9 - 11 am		C++	Blender	Deeper dive topics	MCA Work				
	1 - 2 pm									
	2 - 4 pm		C++ & Git	Blender	Deeper dive topics	MCA Work				

C++ Class Structure

- Class time from 9-11am and 2-4pm on **Monday**, **Wednesday**, and **Friday**

  - Try to be 5-10 minutes early if possible

- Class time is used for lectures and worktime (1 hour each)

- Daily activities reinforcing concepts

- Concepts will build on each other so <u>ask questions early</u>

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Motivation (Why C++?)

- C++ is a challenging but powerful language

- The foundation of more software than you think

- Concepts in this class extend to many other languages

  - C# for Unity especially…

Questions?

- Everything is available on the website calendar

- [SPIRE-EIT 2024 Program Website](#)

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