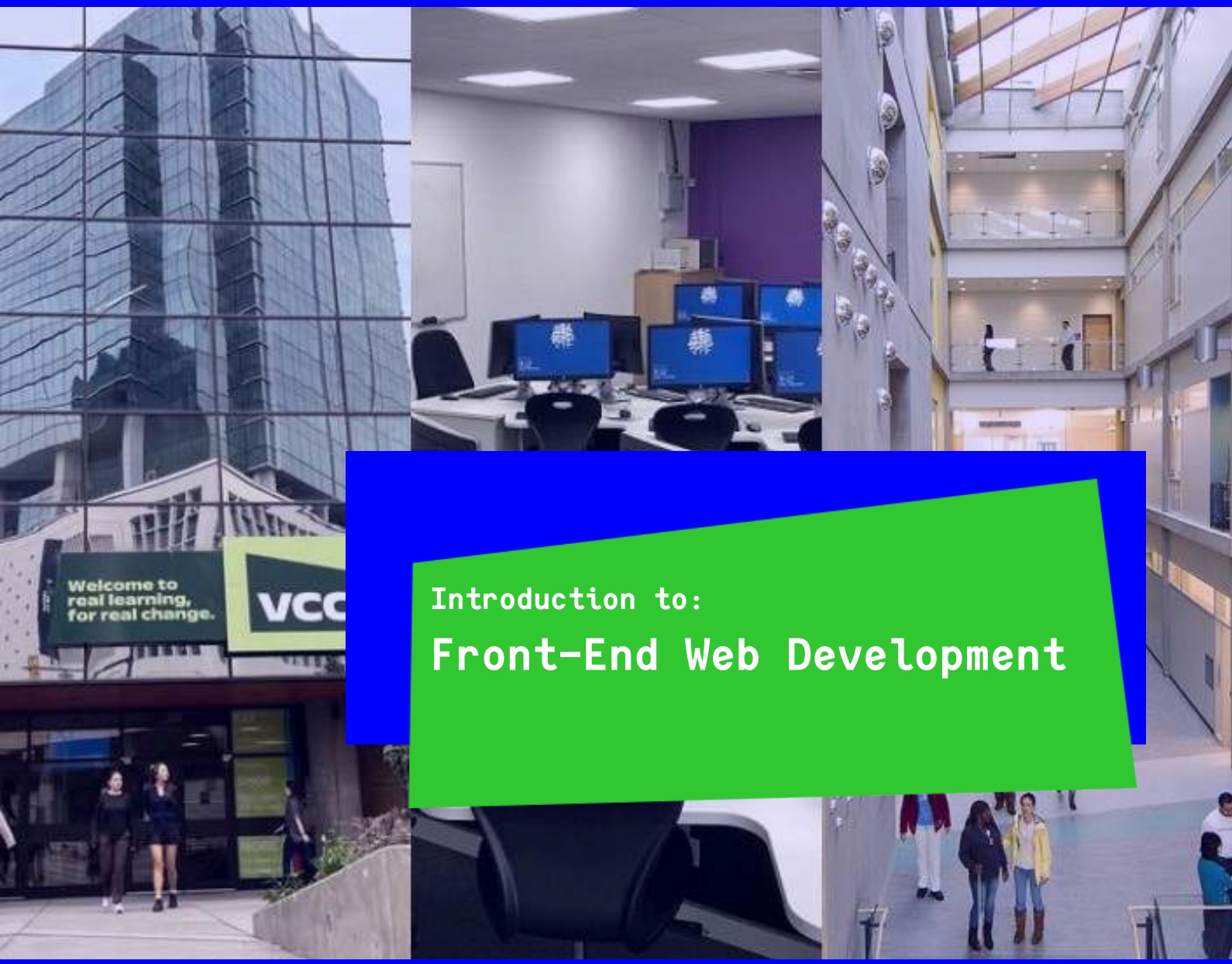
PIDP 3210: Curriculum Development
COURSE REFLECTION 1

Instruct



Introduction to:
Front-End Web Development

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Assignment 1, Part 1, Subject: “What are the key changes needed to transform education for the digital future?”

Objective

The quote I’d like to discuss in this reflective writing is from Bill Gates, via his blog ‘Gates Notes’:

> *But drawing on his experience creating Khanmigo, an AI-powered tutor, Sal makes a compelling case that AI-powered technologies will be different. That’s because we finally have a way to give every student the kind of personalized learning, support, and guidance that’s historically been out of reach for most kids in most classrooms. (para. 6)*

Bill is referring to Sal Khan in that quote, a ‘long time pioneer of innovation in education’ ~ Bill Gates.

The quote is promoting benefits of AI in the classroom, which is relevant to this exercise because AI is the most immediate and widely discussed factor impacting the digital future of education.

This quote caught my attention because I’m grappling with an AI course while taking the PIDP program. I’m beginning to understand more about how AI can be used as both a ‘pseudo engineer’ on a web development team, and a personal conversationalist.

My initial analysis of the literature around AI however, was mildy concerning. There are many suggestions in the literature that AI poses significant risks to global societal health and well-being.

AI as a tutor may be a double-edged sword.

Reflective

The idea of AI operating as a personal assistant to students in the classroom is interesting from the educator’s perspective. To me it sounds promising. AI can be used to respond to chat participants in exactly the way that works best for them, increasing the likelihood of positive educational outcomes.

The high risks of confirmation bias, however, which may prompt students to adopt either viewpoints they’ve already been exposed to or biased perspectives that are more reprensentative in a digital training set than in a curriculum, are clear warnings AI needs to be implemented carefully.

The problem of bias in AI is significant enough that Forbes Magazine, a well-known business publication, mentions it in the following quote:

> *Algorithmic bias is a big problem that comes from the choices made during the creation of an algorithm, regardless of whether the choices are intentional or not. It has the potential to have very severe consequences in areas such as giving out loans, hiring and the criminal justice system. (para. 3)*

As I understand it, one problem with large scale AI services is that they are expensive and time consuming to train. In order to be useful to a large enough portion of the market to make economic business sense, they need to be trained on very large data sets.

Facebooks LLama model, for example, is currently trained on something like 450 billion parameters.

Parameters come in a variety of formats, but it is helpful to think of them as questions with answers. Those data points come from the world-wide web, which is on a large scale accurately representative of social bias as it exists in the real world.

A curriculum, on the other hand, collects and distributes information to students about the way governing bodies want society to work, not the way societies actually work.

An institutionally approved curriculum is meant to make the world a better place than it is, even if the term 'better' is applied subjectively across institutions.

In this way, in theory, AI could apply a kind of backward force on the kind of progressive thinking that is common in curriculum across, if not all, at least most modern day educational institutions.

Adapting policy to accommodate AI is definitely one of the key changes needed to transform education for the digital future (or digital now, as it were).

Interpretive

When I think of the amount of variation that can exist in the way AI is trained, and the propensity for humans to focus on their own personal agendas, even in the kinds of places where it is in everybody's best interest to be as free from bias as possible, like courtrooms, hospitals, police forces, and schools, I think of diverging markets.

AI becomes a subjective programmable tool. One product may offer a more gendered view than another. Another product may be in general more hawkish. The problem is already being formulated globally as a regulatory problem.

But how will different nations, regions, and institutions draw their regulations?

According to Stanford's recent publication "REGULATING UNDER UNCERTAINTY: Governance Options for Generative AI" nations are tackling the problem of AI regulation in strikingly different ways.

> *China has implemented a series of laws that place significant restrictions on AI development. Other countries, such as Brazil and Canada, are actively engaged in formulating regulatory frameworks for AI. In contrast, countries like Japan and India initially refrained from enacting specific AI legislation but are now gradually progressing towards its adoption. The United Kingdom, while recognizing the risks and challenges associated with AI, particularly its most advanced models, has thus far chosen not to introduce specific AI legislation, though this stance may be reconsidered in the future. (CHAPTER 5 | Regulatory Initiatives, para. 3)*

As a future instructor, while the problem might not be as evident teaching a web development program, it's definitely worth thinking about what kind of AI should be recommended to students, and where that AI should come from.

Decisional

Given that training AI is currently beyond the compentancies of the average AI user – individual and institutional alike – immediate decisional action as an instructor student doesn't feel relevant. It will be sometime before individuals and institutions are manually fine-tuning products, or selecting specific 'pre-biased' or 'view-leaning' products.

However, it does seem prudent that those who are teaching students that use AI, with or without AI, should ensure students are aware of risks inherent in the products they may be using.

In my case, since AI as an integrative build-pipeline tool is already rapidly changing the field of web development, I will be including the use of AI, as a 'psuedo engineer', in any course I end up teaching.

I will certainly take a few minutes at the beginning of any course I teach to ensure students are aware of the possibility of bias – including confirmation bias – in any AI tools they may use.

References

Gates, B. (2024, May 21). *Sal Khan is pioneering innovation in education…again Brave New Words paints an inspiring picture of AI in the classroom.* Gatesnotes.com. https://www.gatesnotes.com/Brave-New-Words

Randieri, C. (2025, March 14). *Bias and corruption in artificial intelligence: A threat to fairness.* Forbes. https://www.forbes.com/councils/forbestechcouncil/2025/03/14/bias-and-corruption-in-artificial-intelligence-a-threat-to-fairness/

G'Sell, F. (2024). *Regulating under uncertainty: Governance options for generative AI.* Stanford Cyber Policy Center, Freeman Spogli Institute Stanford Law School. https://cyber.fsi.stanford.edu/content/regulating-under-uncertainty-governance-options-generative-ai