

Value Proposition:

Inputs: (In addition to what AISC is already doing/ will do.) People needed to generating and exploring leads, and continued relationship building afterwards, in addition to any specific actions taken.

Activities: (In addition to what AISC is already doing/ will do.) Potential: advertising, onboarding of graduates into competitions.

Outputs: 1) Challenges/Competitions that vastly elevate a new graduate's ability to get hired in the 180 day 'window'. 2) Recipes and Knowledge Graph, representing the cutting edge of industry relevant, adaptive education curation. 3) The AISC community, a place of learning, contacts and even job advertisements. 4) Possible direct advertising, and indirect advertising resulting from far superior results from grads in a relatively short time period.

Outcomes: An education that remains relevant with far less work hours on the school's side, and far more modular for their changing needs. Students who much more regularly achieve the single coveted short term result, employment. And, students who much more regularly achieve longer term achievements of academic papers and momentous code (either of their own making, or as a direct result of their contributions on a company's team). These student results (from education and everything else AISC offers), are the lethal competitive edge.

Impacts: The recipe system/ knowledge graph scales with the industry (and after a critical mass, helps drive it); allowing a given bootcamp to remain competitive, and simply even remain, in the accelerating times to come. The massive boost in student outcomes will steadily become a self perpetuating ball of greatness for a school; drawing in better and better students (akin to name brand Ivy League schools).

Main problems, and their solutions: i) An education system that remains purposeful in a rapidly changing & advancing world. —> The recipe/ knowledge graph system.
ii) The unspoken great conundrum of bootcamps (and all coding scholastic institutions short of a degree from MIT/Waterloo/etc.): students are having nearly as difficult time finding employment, as their counterparts who are self taught. —> AISC's community and real world competitions give graduates priceless advantages.

Value Proposed:

- 1) Challenges/competitions. (Post education, but can be setup to coordinate with a graduating cohort)
- 2) Recipes & Knowledge Graph.
- 3) Community.
- 4) Advertising.
- 5) The lethal competitive edge in a quickly over-saturating industry.

1) *Challenges/ competitions.* Students graduating a bootcamp generally have a Github profile with a bunch of beginner repos, and their graduating repo that's somewhere between beginner and intermediate. This profile is not reflective of what the graduate is capable of doing, but it is what employers see first.

Upon graduation 95-99% of these hungry, resilient, driven and adaptable computer scientists are not competitive before employers (which can be measured by how many actually achieve employment** within 90-180 days). They have no work experience and do not have anything in

their Github that will allow them to stand out amongst scores of other resumes. Kaggle and Coursera/YouTube projects are nice to have, but not competitive.

Competitions allow a student to put something very competitive in their Github profile, as well as some powerful experience working in diverse teams, driving at indefinite and sometimes nebulous goals. If the student wins any money from the competition, that is technically work experience.

Competitions also allow a driven, capable graduate to show their capabilities before industry experts, whom in turn are much better connected to potential employment than a new graduate.

—> In the future, as challenges become bi-weekly or weekly affairs (as Ammar aims), then having competitions pitched to a cohort nearing graduation would be very powerful continuing education; a means for students to launch their post-school lives that isn't being shouldered entirely by a school.*(1)

2) *Recipes/ Knowledge Graph*. A curated, constantly updated education, that's reactive to developments in the tech world. Each scholastic institution has their own process of doing this, but as the industry diversifies in niches, and exponentially grows; having another set of cross disciplinary professional minds looking at keeping education relevant, is a powerful tool.

The recipes/ knowledge graph are especially useful for bootcamp education bodies. They're modular, and in their current incarnation; predominantly their aim is effectiveness over verbose language exchange. They're taught with the assumption that the student is hungry, rather than part of a bell curve.

In conjunction with challenges/competitions, and the community; recipes offer a rapid growth process for students and graduates.

(Ammar insetting up a similar experiment whereby scientists build out (a knowledge graph) utilizing recipes vs. Regular internet searching, to determine time saved & effectiveness added from crowd sourcing knowledge.)

—> In the future, as the knowledge graph becomes best in industry (as given in the vision), this interaction between scholastic institution and recipes will become inseparable. Those without such a tool won't be able to compete.

3) *Community*. Graduates of a bootcamp generally have almost no contacts in the tech world, which results in a job acquisition process that's as hard as possible (1 job acceptance comes from 10 to 40+ company's interview processes, which comes from 40 to 350+ applications; a rigamarole that takes from a month to a year or more. Some students from my graduating cohort of December 2020 are still looking for a regular job, performing that look the traditional way (throwing out as many applications as possible). Others only got into the industry by becoming an intern for 3-9 months; which is the same option available to dedicated self-taught's.

Generally, students don't know how to make contacts. As the AISC community's big shots are a somewhat close knit group, the competitions are a great way for students to begin building contacts, who are connected to other contacts, etc.

In addition, an unspoken problem of graduates that bootcamps face is, unrealistic expectations. Bootcamp grads have insane work ethics, but it's an ethic overfit to executing code. The iron chin necessary to weather a year or more of interview processes, and/or burning the midnight oil to attend networking events, hasn't been trained at all. Being around industry players will blast grads with what it takes to be competitive in a well paying industry; a well paying industry in a world where most well paying industries are being automated.

—> In the future, the community is only growing in number and quality. As more professionals turn to AISC, this contact building process builds an irresistible momentum. For a prospective graduating computer scientist, this alone is invaluable.

4) *Advertising*. Within the AISC community, advertising would be easily possible, and possibly potent. Many hungry future dev's and data scientists congregate under AISC's rapidly evolving umbrella. But also without the AISC umbrella, advertising is natural, and even more potent. As graduates of a bootcamp solve real world problems in competitions, and even win them; this looks great on the bootcamp. As the competitions scale in size and impact, this proposition grows. As these students get employed within 180 days of graduation, this looks good on the bootcamp. As these students become connected with industry players, that really helps bootcamps in job location of future students. (After a critical mass for a given institution, this becomes a self perpetuating process.)

—> In near the future, as peer reviewed papers prosper in the AISC competition system, and bootcamp grads have their names on those papers; that is priceless advertising for a scholastic institution.

5) *The lethal competitive edge*, in a quickly over-saturating bootcamp industry. Though many scholastic institutions have a varying degree of academic pride, the sheer reality is there are many boot camp options for any student. And self taught is getting easier and more strait forward, from Coursera to YouTube to elsewhere. Any institution that has at their disposal: a best in industry knowledge graph representing an always-relevant knowledge base, real world competitions for graduates*(1), a community rife with industry heavyweights, peerless advertising: will quickly outcompete institutions that don't have these tools. To my knowledge, no bootcamp of scholastic institution even uses an Obsidian like knowledge graph, and at best recommends hackathons / pre-established communities for a graduate to investigate.

*(1) + Once AISC has competitions bi weekly or weekly; it would be a phenomenal benefit for bootcamps to have a challenge/competition specific to bootcamp grads. (Not just one institution's; the cohorts of schools often graduate at predictable points in the year.) Anyone can join, but the competition would be a proving ground for one school vs. Another, one team of graduates vs. others. Any competition that doesn't offer huge monetary rewards, or the opportunity to get a name on an academic paper next to an industry heavyweight: generally doesn't attract heavy hitters. These competitions are perfect for bootcamp grads.

+ Challenges help students flesh out their Github/ Resume with something that will actually land them a job, and help them build meaningful contacts and give them experience working on a team.

+ Recipes help students learn just about anything in the artificial intelligence world as rapidly as possible, let alone what recipes will be, in a system superior to Obsidians.

+ The community is invaluable. Being able to learn from phenom's like Suhas Pai, being able to interact with a diverse panalogy of cross disciplinary scientists from places like NRCan is beyond estimated worth.

+ These are inimitable advantages to any computer scientist, especially those nearer the beginning of their journey. Advantages that cannot be found for free elsewhere.

How to quantify this invaluable resource?

The growing problem that all scholastic institutions face, but is greatly exasperated in bootcamps due to the limited timescale of curriculum; is that the field of data science and machine learning is growing as at an incredible pace, and yet a graduating student today won't have much, if any, different skills than I did graduating in December 2020.

+ Recipes are the perfect solution, especially once curated in an Obsidian-like knowledge graph.

++ This is double true since recipes are designed to answer specific questions/ problems; split into essentials and bonus material. Allowing all students to invest the appropriate amount of time/ energy as wanted, including the bare minimum needed.

+++ This becomes trebly true in combination with AISC challenges, as students can learn the necessities of an entire niche of machine learning to answer a very relevant, modern problem; alongside industry experts running a given completion. Instead of having a vast sea of hypothetical knowledge; what a student learns is being put to demanding test.

Curating an effective education curriculum in a field that changes as quickly as data science/ machine learning, could be made exponentially easier, more accurate, and for new computer programmers more intuitive; with what AISC will soon have available.

If bootcamps do not change, their reputations will alter as graduates struggle to find positions. They'll also become obsolete compared to students who simply learned python and the basics of data science on YouTube, and joined AISC.

Quantifiable Possibilities:

- + Letters of recommendation from industry experts. (e.g. Suhai Pai, Omar Nada).
- + Real world projects.
- + Job opportunities (NRCan was hiring in June, and this was posted in AISC).
- + Working with industry veterans (all projects)
- + Education that's kept up to date by people active in the industry.

