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DOUGAL MG
& ASSOCIATES

Dougal Mac Gregor
Curriculum Vitae

Academic Background

Master of Digital Media | *CDM; SFU, UBC, BCIT, ECUAD – B.C., Canada*
B.Sc. in Communication | *Lamar University – Texas, U.S.A*
MarkStrat Business Simulation | *Harvard Business School – U.S.A.*
Market Validation | *New Ventures BC, InnovateBC – B.C., Canada*
Project Management Certification, PMBOK | *UC Irvine – California, U.S.A.*
Financial Conflicts of Interest; Investigator and Institutional Responsibilities Certification | *CITI Program, University of Miami – Florida, U.S.A*
Project-Based Learning | *PTC, NovoEd – U.S.A*
Business Simulation for Youth | *JA Worldwide – Mexico*
Various Diplomas in Art, Design, CS, Business, and Project Management | *U.S.A and Mexico*

2006: Fischertechnik Mexico

Mr. Mac Gregor started working as a volunteer intern at a *Fischertechnik* franchise in Mexico while he was still completing his high school studies. During this time, he provided Quality Assurance by testing *Fischertechnik* products and mechatronics workshops designed for children and teenagers using the *Fischertechnik* products. He served as a tester providing feedback about the quality, effectiveness, and areas of improvement for the workshops. This included testing the software used to program robots that followed paths and avoided obstacles. Additionally, he provided assistance during workshops, serving as an additional workshop teacher for children.

2007 – 2008: D4 Reality Software Training Academy (D4 University)

During his last two years of high school, Mr. Mac Gregor worked at *D4 Reality*, presently known as *D4 Reality University*, a software training academy offering diploma courses in a variety of areas including but not limited to: computer programming, AutoCAD, 3D modeling, website development, digital art, animation, comics, photo manipulation, video editing, and more. He joined as an Intern providing Quality Assurance, similar to what he did previously at the *Fischertechik* workshops, taking the *D4 Reality* courses and providing feedback on the design and quality of the courses offered. In most cases without the teachers being aware that he was auditing the quality of the course. In addition to his QA work there, he also provided support with marketing and promotion activities such as distributing flyers at locations and providing assistance to the *D4* mascot at comic convention events. These instances provided an additional opportunity for him to speak to people and gather insights, opinions, and feedback.

Mr. Mac Gregor also briefly became an instructor at *D4 Reality* where he taught an introductory course on 3D modeling using *AutoDesk Maya 2007*. He designed a lesson plan where the students had to model a rotating fan, in order to delve a little into animation basics with the fan as well. Mr. Mac Gregor had the opportunity to acquire a great deal of design and technical software skills at *D4*, which included design software from *Adobe* and *AutoDesk*, as well as general skills such as character design, comic design, digital art, marketing material design, web design, among others.

2009 – 2010: ICYL (Brighton School)

After finishing high school in 2009, a unique opportunity presented itself to Mr. Mac Gregor. The director of the *Instituto Científico Y Literario*, — *ICYL* —, asked Mr. Mac Gregor if he was interested in teaching elementary and middle school students. The *ICYL*, presently re-branded as *Brighton School*, is a small K-12 private bilingual school in Monterrey, Mexico. The then director of *ICYL* knew Mr. Mac Gregor well, and knew that he had great potential to teach others in diverse topics bilingually. Mr. Mac Gregor already had experience teaching younger peers when he gave art workshops in high school to middle school peers, as well as during the *Fischertechnik* mechatronics workshops, and more recently teaching older students in *D4 Reality*.

Mr. Mac Gregor was not really aiming for a career as an educator, but after giving it some thought he decided having the experience was worth it and accepted the opportunity. At *ICYL*, he taught English to 7th grade students, and was assigned teacher of title for 4th and 6th grade in charge of teaching history, science, and language arts in English to those grade. He additionally helped as teacher aid and after-school homework tutor to 3rd grade and other grades occasionally.

In addition to teaching, Mr. Mac Gregor was given the opportunity to brainstorm, design, and test games and immersive activities to improve student engagement and learning. This provided him the opportunity to test and learn, experientially and with real-world instances, how fun and games had a strong positive impact, when done right, in learning and human development.

2011 – 2014: Lamar University

In 2011, Mr. Mac Gregor was admitted to *Lamar University*, — *LU* —, a Texas State university that ranks top nationally (U.S.A.) in business and engineering fields. At *LU*, he was initially admitted into the computer science department, but Mr. Mac Gregor decided that studying communication would afford him more valuable skills in general. His reasoning was that, learning how information is exchanged between individuals, and how to properly communicate with others was more essential than learning computer engineering. He could always just do a masters in computer science later, but the art of human interactions and communication took precedence, as that was needed regardless of the industry, career, or discipline. Therefore, he graduated with a Bachelor of Science in Communication, with double-minor in Corporate Communication and in Film Studies.

While at *LU*, Mr. Mac Gregor was the first and only undergraduate student from the department of communication to receive a research grant from the university. He sought the grant to conduct research with local high schools and middle schools and gather statistical data about the impact of gaming in learning and its relevance to educational institutions. In order to get the grant, Mr. Mac Gregor obtained a *Financial Conflicts of Interest; Investigator and Institutional Responsibilities Certification* from the *CITI Program* via the *Institutional Review Board*, — *IRB* — of the *University of Miami, Florida*. This certification was required by any potential recipient of any grant or subsidy from a state university such as *LU*.

With the research grant, Mr. Mac Gregor successfully designed and executed a mass-scale survey. He surveyed five Texas State school districts, collecting feedback from 1,600 7th through 12th grade students, as well as 300 university students, and 100 faculty members, about their attitudes, interests, and opinions toward gaming and the game industry as it relates to their education and career choices. A number of things about this endeavour were impressive, but Mr. Mac Gregor's

ability to successfully survey five school districts was especially noticed, as even university staff have difficulty being able to collect intel from schools at such scale. He became one of five students, out of 15,000+, selected and invited by then university president Dr. Kenneth R. Evans, to attend the *Clinton Global Initiative University* — *CGIU* — in Miami, Florida, representing *LU*. He was also published in the university's newspaper a couple of times.

With support and contributions from a diverse team of faculty from the departments of mathematics, computer science, psychology, business, and communication, Mr. Mac Gregor analyzed the data gathered from his surveys and built a case for the university administration to incorporate a game development program into their roster of offered programs. At the time, *LU* did not have any formal game-related programs in their available degrees or specializations. This was despite *Lamar University* being hours away from Houston and Austin, cities that rank top in the presence of game industry, as well as despite *LU* ranking top nationally in business and engineering fields, and being a moderately sized university with 15,000+ students.

His proposal to the university administration was successful: he originally proposed the creation of a new cross-disciplinary program called "interdisciplinary studies" or something similar, with an interactive media program that included game development in its core — though not limited to that — and involved participation of faculty from different departments. As part of his proposal, Mr. Mac Gregor created a new student organization called *Lamar Interactive Media Organization — LIMO —*, which appealed to a large number of students from various disciplines including Computer Science, Mechanical Engineering, Business, Arts, Psychology, and Communication. The student organization, *LIMO*, had a turnout of a dozen students in its first meeting, which impressed faculty because it was rare for new student organizations to have a turnout of more than two or three students.

Dr. Evans, the then president of the university found the proposal interesting, backed by the market research and the strong student interest (and faculty interest too), however there were some strong challenges involved in getting different departments to collaborate in a cross-disciplinary program — the established academic culture and the structure of the colleges, had the unintended consequence of fostering competition between departments, rather than collaboration, generally speaking —, so the university board settled for investing in a game development program within the existing computer science department, rather than creating an interdisciplinary program.

In 2013, *LU* hired Dr. Timothy Roden to lead the development of the new program within the CS department, and invested in a new lab equipped with high-end Alienware computers. Mr. Mac Gregor worked with Dr. Roden helping with the promotion of the new program and participating in one of the first courses. *Lamar University*'s game development program was launched in 2014 and continues to date.

Other noteworthy feats of Mr. Mac Gregor at *LU* include his addition to the President's List in his freshman semester at *LU*, having attained a 4.0 GPA with 27 credits (equivalent to almost 2 semesters in one). This achievement caught the attention of the faculty, including the then director of student services, Dr. Jim Rush, who personally met with Mr. Mac Gregor to award him with the university's top merit scholarship. Ironically, that same achievement caused him to be rejected by the university's Honors Program for having "too many credits already" during his second semester. Nonetheless, he graduated *Cum Laude* Honors from *LU*, and is a member of two alumni national honor societies: *Phi Eta Sigma* and *Alpha Lambda Delta*.

2011 – 2017: Praeter Labs S.A.P.I.

In 2011, shortly before being admitted into *Lamar University*, Mr. Mac Gregor had started working in a mobile App project with some partners in Mexico. The project was an innovative solution for experiential marketing through a mobile app, back when smartphones were still a relatively new thing. From 2011 to 2014 he carried out extensive research about gaming and learning (much of it at *LU*), but he also did much research on corporate communication, public relations, branding, advertising, consumer psychology, and marketing in general, all of which provided instrumental strategical data for the mobile app project.

In 2015, he returned to Mexico where, together with one of his associates, worked on the UI-UX design for the marketing app, assembled a detailed market and industry research report — which included survey data from 200 consumers, 100 from U.S.A. and 100 from Mexico —, and developed a simple web-app prototype. He co-founded a startup company — *Praeter Labs* — with his partners, and successfully received 7- digit investment offers from *Coca-Cola* and *Tim Hortons* investors.

Due to technical challenges and issues with the software developers in the team, the project was sadly suspended indefinitely in 2017. However, the project was so attractive to the investors, that they continued inquiring about whether the project would move forward or not years later.

2015 – 2016: EJE TRES Creative Labs

Upon returning to Mexico from *LU*, and in addition to working with the *Praeter Labs* project, Mr. Mac Gregor was hired by another startup company in Monterrey, Mexico called *EJE TRES Creative Labs*, a private fabrication lab equipped with 3D printers, computers with AutoCAD, laser cutting and engraving machinery, woodshop, paint shop, textiles and other tools for product prototyping. *EJE TRES* was the first private fab lab of its kind in Monterrey, Mexico, and one of only a handful in all of Mexico. The concept of a *Fab Lab* (and *Makerspaces*) was still relatively unknown.

He was hired by *EJE TRES*'s investors and the founder to help develop the vision of the fab lab, its business model, and business units. Mr. Mac Gregor proposed and designed workshops to teach both children and adults in a variety of topics including furniture design, toy design, robotics design, textiles, and boardgame prototyping, among others. He also proposed a business model that included partnering with a business incubator and consulting firm to provide coaching on product prototyping to entrepreneurs, as well as access to the tools.

2015 – 2017: American Institute of Monterrey

Within a week of being hired by *EJE TRES*, Mr. Mac Gregor received another opportunity that was equally as attractive as working with an innovative and brand-new fab lab: he was hired by Ms. Elizabeth W. Huergo, the then CEO of the *American Institute of Monterrey* — *AIM* —, also in Monterrey, N.L., Mexico, to support her team of directors as an internal consultant in curricular innovation. Located in one of LATAMs most populous cities (6 million pop), *AIM* at the time had three campuses with students from 27 nationalities, accredited in the U.S.A. by the *NEASC*, in Europe by the *CIS*, a *Microsoft Showcase School*, an *Apple Distinguished School*, and an active member of the *UNESCO United Nations* simulation program. *AIM* is a top choice for consuls and company executives to provide their children with top quality education. Mr. Mac Gregor was strongly interested in both opportunities so he ended up working as a consultant for both *EJE TRES Creative Labs* and the *AIM* at the same time.

During the interviews Mr. Mac Gregor was told he would be working on a confidential project, so his tasks were undisclosed, and all he knew was that the directors were interested in his background and ideas. He soon found out that the CEO wanted his help with the incorporation of high school grades to the school's curriculum, which at the time only included up to middle school grades. However, the CEO also tasked him with designing and developing a pilot makerspace program with the 4th grade students. His experience working with the *EJE TRES* fab lab was instrumental in his work designing and developing the makerspace program with the 4th graders at *AIM*.

One thing worth noting, is that usually makerspace programs for children make use of products such as *Fischertechnik*, *LEGO*s, *MindStorms*, or similar, which are pre-designed parts and pieces with which the students can more easily build things. However, the CEO of *AIM* specifically requested that the makerspace program did not use such materials, and instead that children must use raw materials, and especially recycled materials, such as cardboard, bottles, cans, etc. to build the things. Mr. Mac Gregor found this to be a fascinating request, but also a rather challenging one with the children, who were not particularly interested in working with recycled materials and demanded to see the *LEGO*s instead.

One strategy that Mr. Mac Gregor used to tackle this challenge, was to create a 'Challenge Roster', which was essentially a binder with examples of objects the students could make with the recycled materials such as battery powered cars, windmill houses, marble mazes, water/air rockets, and catapults, to name a few. Mr. Mac Gregor gamified the makerspace program, establishing badges and titles the students could obtain upon building specific things from the *Challenge Roster*. For example, build a battery powered car would earn a student the "Auto Maker" title.

Regarding the design of a new high school campus: Mr. Mac Gregor surveyed and interviewed the students at *AIM* and found out that the vast majority of them were sold on the idea of attending one of the popular local high schools. At the time, the high school market was dominated by three high schools in particular which all the *AIM* alumni typically ended up going to. Mr. Mac Gregor realized that *AIM* was facing a significant market penetration challenge, as 99% of students said they had no intention of staying at *AIM*'s new high school because they wanted to go to one of the popular high schools with their friends. Drawing on his extensive research about learning and human development, as well as a wide variety of disciplines, he drafted a master plan for an innovative brand-new high school campus that would stand out from the other popular high schools out there.

His plan for the new high school proposed a curriculum that was designed to help students learn by working on real hands-on projects in laboratories and the field, guided and mentored by real-world experts, and using real tools, as opposed to only sitting in a classroom listening to lectures and writing reports. The proposition included the identification of four major areas of study or skills: art, engineering, research, and management. Mr. Mac Gregor had doubts about whether his master plan would be too far ahead of its time for the school administration. He assumed that, if accepted, the master plan would suffer significant changes, since it represented a far leap from traditional and existing curricula and pedagogical practices. To his pleasant surprise, the school board accepted the master plan with almost no change, and the team of directors also made minimal adjustments to it. This was in great part, thanks to Ms. Huergo's extraordinary leadership and vision, her appreciation of what Mr. Mac Gregor was proposing, and her willingness to persuade the board to finance such an endeavor.

When the investment for the new high school was secured, Mr. Mac Gregor worked with the directors and heads of various departments including: English curriculum, Spanish curriculum, technology, arts, admissions, public relations, human resources, purchasing & inventory, security, operations, and architecture & infrastructure. He provided vital support and consultation on a wide range of topics including: lab equipment inventory and budget, layout of campus facilities in blueprints and AutoCAD, curricular development, staff profiles and job descriptions, creation of onboarding materials and infographics, marketing materials, and documentation.

The new high school campus was named *APS*, short for *AIM Preparatory School*, and was inaugurated in 2017, with the four skill areas proposed by Mr. Mac Gregor known as the "*APS Academies*".

The *AIM Preparatory School* that Mr. Mac Gregor helped design, continues to date and was successful in retaining *AIM* middle school alumni and competing against the established high school brands. Moreover, it also attracted attention from international organizations and was purchased in August 2019 by *Inspired*, a global network of premium schools.

2016 – 2023: GT Consulting S.C.

In 2016, one of Mr. Mac Gregor's partner's at *Praeter Labs* co-founded another company called *GT Consulting* — *GTC* — together with two other *GTC* co-founders. During that time, Mr. Mac Gregor had a full plate with *Praeter Labs*, *EJE TRES*, and the *AIM Preparatory* projects, however he still provided instrumental support and access to resources to the *GTC* co-founders. *GT Consulting* was founded as a consulting firm in civil, industrial and economic engineering. The *GTC* engineers provided valuable contributions to the *Praeter Labs* project too, for which they carried out an economic feasibility analysis — which is one of the consulting services offered by *GTC*, and was a key element in the business plan that helped in successfully receiving investment offers —.

In 2021, Mr. Mac Gregor joined *GTC* full-time, as a Consulting Partner, contributing significantly to general company improvements, strategic growth and vision.

2017 – 2019: Centre for Digital Media / SFU, UBC, BCIT, ECUAD

In 2017, Mr. Mac Gregor was admitted with a merit scholarship into the *Master of Digital Media* program — *MDM Program* — at the *Centre for Digital Media* — *CDM* —, in Vancouver, B.C., Canada. The *MDM Program* is a unique and special program jointly accredited by Vancouver's top 4 universities: *Simon Fraser University* — *SFU* —, the *University of British Columbia* — *UBC* —, *British Columbia Institute of Technology* — *BCIT* —, and *Emily Carr University of Art and Design* — *ECUAD* —. The program admits only about 52 students each year from 500 or more applicants from around the world.

One of the things that makes the *MDM Program* unique is that each year, an equal number of applicants with design, management, and computer science backgrounds is selected. In other words, out of the roughly 52 applicants accepted, the *CDM* admits 1/3 designers, 1/3 managers, and 1/3 engineers, to create a cohort that mimics a real-world environment where designers, managers, and engineers work together on real projects. This model is strikingly similar to the model that Mr. Mac Gregor devised and proposed for the *AIM Preparatory School*, but Mr. Mac Gregor did not know about the *MDM Program* until after he had already designed the *APS Academies* model.

During the MDM Program, Mr. Mac Gregor was assigned to work on two virtual reality — *VR* — projects: an Autism demystification VR experience, and a CPR — cardiopulmonary resuscitation — training VR simulation.

The Autism demystification VR experience was a project developed with *Archiact*, a leading VR game development studio in Vancouver, for their client *Friend 2 Friend Society* — *F2F* —, a non-profit dedicated to raising awareness about Autism, using their proprietary workshops. The project involved creating a VR experience representative of F2F's in-person workshops, where participants experience being a student with Autism being overwhelmed by sensory stimuli such as sounds, lights, and colors. Having done extensive research into human development, psychology, and cognition, and having been diagnosed with *Asperger*'s himself as a child — a mode of Autism —, Mr. Mac Gregor was able to provide particularly helpful insights to his team for this project. As a side note, the directors of the MDM Program did not know that Mr. Mac Gregor had an Autism-related diagnosis from childhood when they assigned him to the project, it was serendipity and fate.

The other project, a CPR training simulation, was developed with renown surgeon Dr. Karim Qayumi and the *Centre of Excellence for Simulation Education and Innovation* — *CESEI* — which he founded, in collaboration with the *British Columbia Simulation Network*, the *Vancouver General Hospital*, *Vancouver Coastal Health*, and the *Vancouver General Health & UBC Hospital Foundation*. Dr. Qayumi's *CESEI* is now presently known as *VGH SIM* — *Vancouver General Hospital Simulation Centre* —, and has the objective of developing and providing cutting-edge training to healthcare professionals through high-tech simulations such as realistic dummies and VR/AR simulations. For this project, Mr. Mac Gregor carried out market and user research, and created a detailed report about available VR technologies that could be used for CPR training, comparisons between options, technical challenges, user testing feedback, and even some economics. His research and report was later used for a paper published in the peer-reviewed *SAGE Journal* about the feasibility of using VR for CPR training. The published paper can be found here: https://journals.sagepub.com/doi/10.1177/1046878118820905

2018 – 2019: LBC Studios

To comply with his internship requirement for the *MDM Program*, Mr. Mac Gregor did an internship as a Quality Assurance Analyst at *LBC Studios* in Vancouver, B.C. Canada. He was responsible for QA for the successful mobile game of *Hempire*, a tycoon type game for mobile devices. When his internship period was over, Mr. Mac Gregor was hired as a full-time permanent QA by *LBC Studios*, and was given additional tasks that included helping with the design and development of onboarding materials for new QA hires.

2019 – 2022: KABAM Games (Netmarble)

While at *LBC Studios*, an opportunity appeared for Mr. Mac Gregor to join *KABAM Games* as a Quality Assurance Analyst. Up to this point, Mr. Mac Gregor had experience doing Quality Assurance with startups, indie teams, and medium sized studios. *KABAM* however, was a company with over 500 employees in Canada and the U.S.A., and a subsidiary of South Korean *Netmarble*, one of the world's biggest mobile game studios. So Mr. Mac Gregor welcomed the opportunity to experience the differences between teams and companies of all sizes, all the way up to the largest.

At *KABAM*, Mr. Mac Gregor worked as development QA for a new *MARVEL* title, where, in addition to the standard QA tasks, he was tasked with helping develop onboarding materials, and also

contributed with a proposal to improve crash log analysis by creating an automation script (for which he drafted a flow diagram), as well as through the use of *Tableau* analytics boards and queries. He was the first QA Analyst to adopt and use *Tableau*, and encouraged other QAs to use it too.

He was later assigned to the certification team, as a Certification QA. In this role, his duties involved scrutinizing *KABAM* games (which included *Disney* and *Transformers* titles) before being released to the App stores, to comply with Apple and Google requirements. He was additionally tasked with creating flow diagrams (using *Lucid Charts*, which he suggested himself) of game screens (which grew to more than 500 screens) to help not only QA but also designers and developers keep track of game content and user flows.

While at *KABAM*, the marketing department requested support from the QA department to test the company websites (including the game websites). The QA department was unsure whether they could support the marketing team, as nobody in the QA department had experience doing QA for websites. Mr. Mac Gregor, however, did have experience with web design and development, which included some testing and QA, so he became the go-to QA for *KABAM*'s web development team.

In 2021, Mr. Mac Gregor left *KABAM*. However, after failing to receive help from the QA department, the web development team reached out to Mr. Mac Gregor for his continued support as an external QA consultant/contractor.

2020 – 2021: SensoDrive Technologies Corp.

While still at *KABAM*, Mr. Mac Gregor joined *SensoDrive Technologies Corp.* — *SD* — as a part-time Business Analyst and Intelligence Consultant. SD is a prop-tech startup in Vancouver, B.C., Canada which offers an innovative solution for parking, green mobility, and alternative modes of transport. Working directly with the startup founder, Mr. Mac Gregor carried out extensive market and industry research, to provide vital and necessary insights for business development and expansion. Other services provided to *SD* by him included helping devise a user acquisition strategy, design of marketing / advertising materials, and design of job descriptions and onboarding materials.

Mr. Mac Gregor also supported *SD* by supervising, guiding and coaching a team of business intelligence students from *SFU* who were doing their co-op with *SD*. It is interesting to note that, the students carried out a market study similar to the one Mr. Mac Gregor did previously, and their conclusion was the same as Mr. Mac Gregor's.

2020 – 2022: Indie Game Development

In 2020, Mr. Mac Gregor was hired by a small indie game development team to help them with game design and game monetization. Mr. Mac Gregor was initially providing consulting services to the team's lead game designer, lead game developer, and a mathematician who was helping with economy and balancing. However, before he knew it, Mr. Mac Gregor was getting his hands dirty with computer code, and he was enjoying it. The game was developed using the *Lua* programming language, which was different from other languages he was already familiar with. In addition to game design, Mr. Mac Gregor also worked on some complex code systems including a collision-detection system using trigonometric calculations, a responsive game UI grid-tile system, and a plugin for 3D voxel mapping which included an API using both *Lua* and *NodeJS*.

Present: Dougal Mac Gregor & Associates

Having accumulated over 15 years of valuable experience, skills and knowledge, most of which has been working directly with business stakeholders in diverse industries and teams of all sizes and backgrounds, Mr. Mac Gregor has partnered with other equally accomplished and talented professionals to continue offering consulting services to clients and projects. He founded Dougal Mac Gregor & Associates, where he leads a team of professional consultants and freelance contractors. The combined areas of expertise and skill of Mr. Mac Gregor and his partners makes for a comprehensive package of services that any business in the 21st century is likely to need.

At DMG&A, Mr. Mac Gregor offers two primary areas of service: Software Solutions, and Business Solutions. The first area focuses on the design and development of software applications and solutions, whilst the other area focuses on overall business development, planning, and operation.


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