



***Ross Bigelow M.Sc, B.Tech, DipT***

***Program Coordinator Computer Science and Artificial Intelligence***

E-mail: [ross.bigelow@georgiancollege.ca](mailto:ross.bigelow@georgiancollege.ca)

Instagram, TikTok, Twitter: @rossbigelow

Personal Website: <https://bigelow.cc>

Ross has taught and coordinated technology programs for over 24 years. Prior to coming to Georgian in he held roles including IT manager, Director of Online Learning and Chief Information Officer. While at Georgian, Ross has coordinated 5 programs in the Computer Studies portfolio and has been very active in developing new programs including Mobile Application Developer, Big Data Analytics, Computer Science (Partnership with Lakehead), Artificial Intelligence and Game Design and Simulation.

He holds three diplomas in Engineering Technology, a Bachelor of Technology, and a Master of Science. As a faculty lead researcher, Ross' research explores ways to build smarter, more connected products and is leveraging AI systems to help companies become market leaders with Industry 4.0 solutions. Some recent projects include a smart wearable for families impacted by autism spectrum disorder, an educational device that makes it easier to learn how to code in a fun and kinesthetic way and an AI-controlled agriculture and lighting system designed to promote maximum crop yield in an energy-efficient and predictable manor.

When he's not helping students or spending time with his kids, Ross also enjoys working with the Henry Bernick Entrepreneurship Center helping entrepreneurs leverage technology to achieve their business goals.

#### **Research Interests and Expertise:**

- Advanced Manufacturing
- Artificial Intelligence
- Internet of Things
- Health Technology
- Mobile Application Development
- Wearable Technology

#### **Patents:**

- Interactive scheduler and monitor-  
<https://patents.google.com/patent/US20190328227A1/>

### Publications and Presentations:

- Conversational AI OER textbook, eCampus Ontario, 2022
- Artificial Intelligence & Augmented Reality, Automation Accelerator Program, 2021
- Competitive Smart Manufacturing, Simcoe County Automate to Innovate, 2020
- Industry 4.0. Panel, Manufacturing Innovation Summit, 2019
- Interactive Zone 321Maker – Digifest, George Brown College, 2017
- Technology Enhanced Agriculture - Apps for Ag. Grey County, 2016
- Online Course Development Showcase, eCampus Ontario, 2016
- Technology Interactive Zone – ETC Advancing Learning Conference, 2014
- Project-Based Learning – Georgian College Focus on Teaching Conference, 2013,
- Setting up a Virtual Lab Environment - ETC Advancing Learning Conference, 2012

### Product Development:

- Smart Grow Lights, Omnia Technologies Inc.- A device capable of automatically adjusting the intensity and wavelength of light based on the type of plant which ensures minimal energy usage to achieve optimum plant growth.
- Smart Counter, Inuksuk Interactive Inc.- A portable wifi-enabled device that can produce real-time data analytics for virtually any physical object. This device has numerous applications such as people counting and service queue time monitoring. Leveraging a cloud-based AI system, it can utilize predictive analytics to help businesses ensure just in time service levels for processes such as service reps or checkout cashiers.
- OlliWatch wearable mobile application. OlliWatch is a smart wearable device that helps autistic children with transition management, scheduling and life skills. Using sensors and biometrics, OlliWatch can help children work through an overstimulation event with reduced caregiver intervention, as well as provide parents with a set of tools that offer consistent, positive reinforcement and help establish healthy behaviors and positive attitudes.
- 321Maker Arduino-Compatible Shield - 321Maker is the easiest way to get started programming with the Arduino platform without having to know how to build electronic circuits. Our 321Maker kits are Open Educational Resources (OERs) that utilize scaffolded, project-based learning methodology to enable learners to focus on building exciting and engaging projects without the added complexity of having to hookup devices or use breadboards.

### **Awards**

- 2016 Georgian College Board of Governors Employee Entrepreneurial Award
- 2015 Georgian College Board of Governors Team Award – Chris Hadfield Conference
- 2013 Teaching Excellence Award, Centre for Teaching and Learning, Georgian College