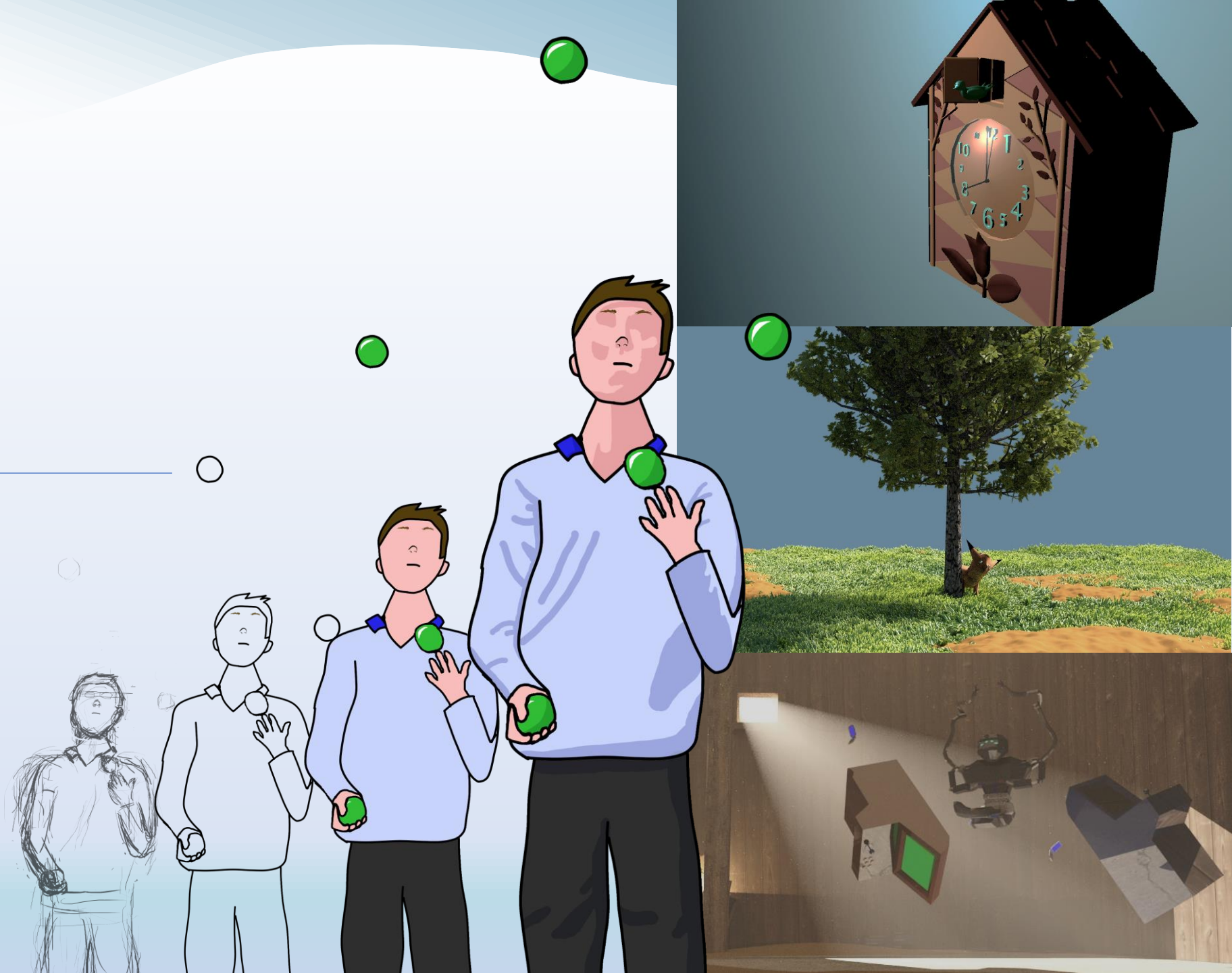


Portfolio

Joshua Hanneson 2023





Joshua Hanneson

Bio

Joshua Hanneson is a recent graduate in Nanotechnology Engineering at the University of Waterloo. He is constantly learning new skills and excels at designing experiences for people. His past design experience includes web development, CAD design, and animation.

Experience

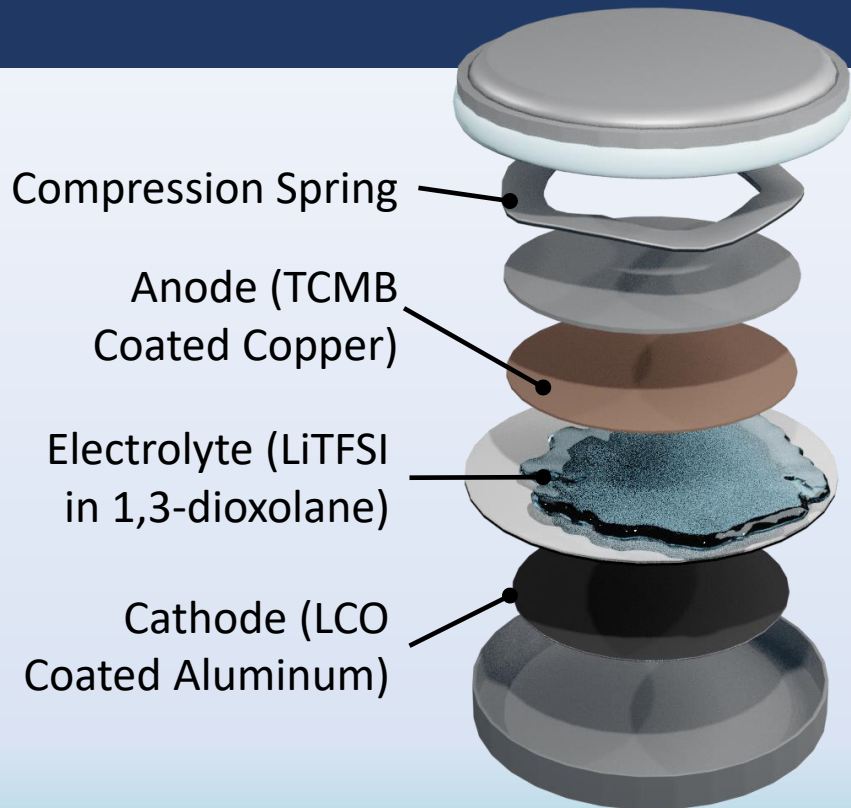
- Process Engineering, GMP Engineering (Jan 2022 – Aug 2022)
- Project Coordinator, Colleaga (Sep 2021 – Apr 2022)
- Mechanical Engineering, Maratek (Jan 2020 – Apr 2020)
- Business Systems Analyst, CIBC (May 2019 – Aug 2019)
- Industrial Engineering Assistant, Alumaticor (Jun 2018 – Aug 2018)

Skills

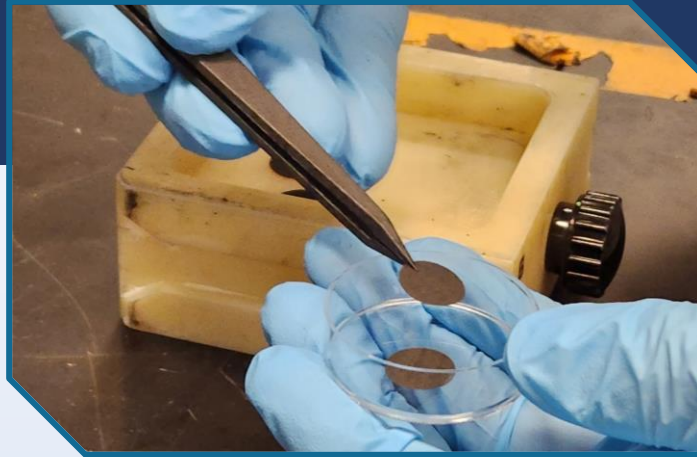
- CAD Design (AutoCAD, Solidworks)
- 3D Modelling (Blender, Maya)
- Programming (Python, C++, MATLAB, C#, HTML, VBA)
- UX Design (writing user stories, use cases, and designing wireframe mock-ups)

ARCTIC

Lithium Batteries



Anode Casting




Final Product



Battery Cell Design

This Li-ion battery was designed with a modified electrolyte and anode for superior performance at -20°C conditions. Lithium-ion diffusion is improved through a porous TCMB carbon structure.


 Colleaga

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Accelerate

Nurturing collaborative ventures for health and social good




What is the Colleaga Impact Venture Studio?

Through the [Colleaga Impact Venture Studio](#), Colleaga connects entrepreneurs, investors, academics, public sector organizations, social sector, and private corporations into collaborative impact ventures focused on UN Sustainable Development Goals.


Activators have access to:

- Disciplined, expertly guided active learning processes, designed to output successful and scalable projects, while enriching their personal learning and individual growth
- Colleaga's Impact Collaboratory which allows impact founders to set up preconfigured, easily integratable innovation sandboxes to design, build, and test their specific solutions


Want To Get Involved?

 JOIN THE CONVERSATION

Colleaga's Impact Venture Studio has chapters forming in [Canada](#), the [USA](#), [Southern Africa](#), and the Middle East/Northern Africa. Browse these communities to view the projects starting to form.

 GET INVOLVED

Want to join a project? Send us an email at innovationsherpa@colleaga.org or [comment on a venture post](#) to indicate your interest.

 STAY INFORMED

Leave your name and email down below to stay informed about our studio updates.

Email Address *

First Name

Last Name

Submit

* Indicates required

Website Design

This webpage was mocked up in InVision and then published using the Drupal framework. Three different call-to-actions are displayed on the page to increase engagement for different users.



Icons are used to quickly convey information to the user.

Digital Art

This drawing is a study in digital colouring and shading based off of a reference shown below.

Reference Drawing



Sketch



Line Art



Base Colours



Shading



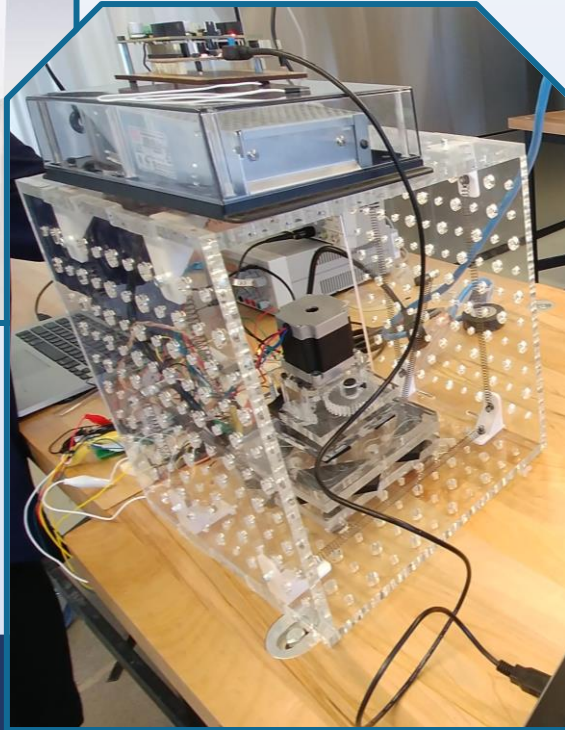
Scanning Tunneling Microscope



CAD Rendering

This STM was designed using low budget parts. It operates by scanning an atomically-sharp titanium tip over the sample surface and measuring the resulting electron tunnelling current.

Final Product



Scanning tip

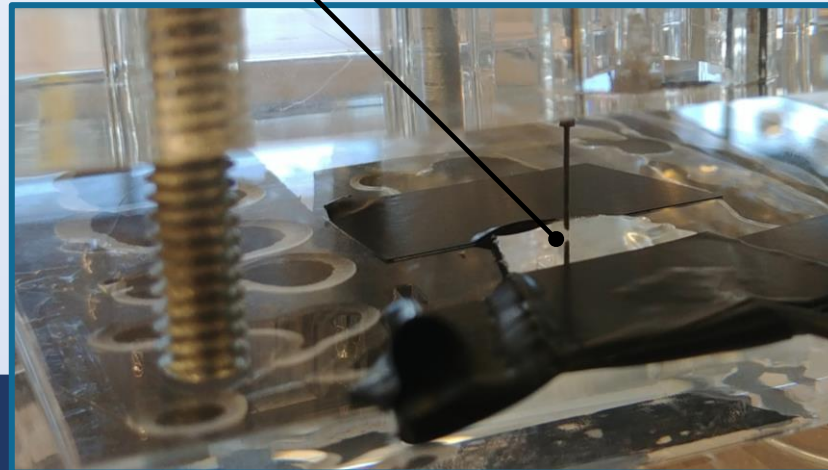


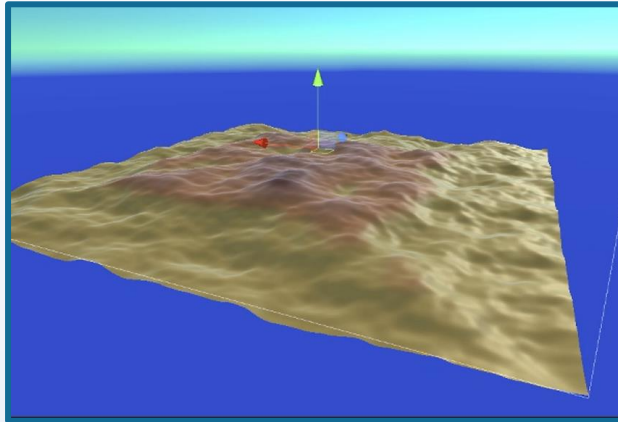
Image capture of grooves on a CD surface



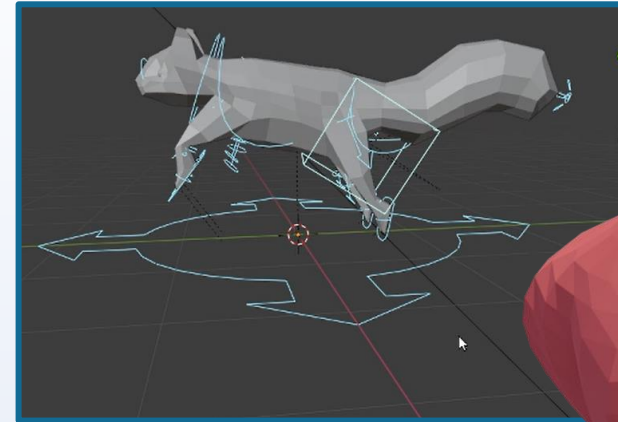
Video Game Development



Colour Concept



Procedural Generation



Playable Character Rig



Contact Information

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