

# Sam MacKinnon

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## SKILLS

**Multimedia Production (10 years):** Award-winning animator (Ottawa International Animation Festival, 2006). Also experienced with illustration, video production, and graphic design using Adobe Creative Suite.

**Interactive Design(3 years):** Experienced with learning module and online course content creation.

**Software Engineering (2 years):** Expertise with programming web apps from scratch using languages and frameworks such as JavaScript, jQuery, Typescript, Node.js, Express.js, HTML5, CSS/Less, MySQL, and MongoDB. Also experienced with Git, Java, Haskell, Prolog, and AS3.

**Big-picture Thinking:** Skilled at synthesizing information, combining multiple disciplines, and visualizing how individual parts of a project fit into a whole.

**Communication:** Strong ability to distill down complex information into easily digestible forms through writing and video.

## EDUCATION

### University of British Columbia

B.Sc. Integrated Sciences (2013 – 2017)

- Interdisciplinary science degree focusing Computer Science, Life Sciences, and Science Communication.

### Selkirk College

Contemporary Music (2006 – 2008)

- Focus on digital production and writing music for film and television.

## MULTIMEDIA DEVELOPMENT

### Multimedia Designer and Programmer

*April 2016 – July 2017 (contract)*

Physics and Astronomy Education, UBC (Vancouver, Canada)

- Designed interactive JavaScript web apps for UBC's Physics 100 and Physics 117 online courses.
- Researched and implemented a simple, flexible solution for embedding interactive videos with quiz break-points into courses.
- Produced videos and animations to explain difficult physics concepts to students.
- Created a website to host videos and interactive content, which can then be easily embedded into websites and online courses.

[www.veryscience.com/physics100.html](http://www.veryscience.com/physics100.html)

**Full Stack Developer***December 2016 – present (personal project)*

Palette Machine (Vancouver, Canada)

- Created the website [www.palettemachine.com](http://www.palettemachine.com), an interactive color palette design tool.
- The web app is hosted with Google's Firebase, and has a fully functional back end with a JSON-based relational database.
- I used SVG graphics and a drag-and-drop interface to give designers the best possible experience when creating a color palette.

**Learning Module Designer***May 2015 - September 2015 (work study)*

Medical Genetics, UBC (Vancouver, Canada)

- Worked as a lead designer on three online modules for teaching medical students about the genetics associated with PKU, Down Syndrome, and Bipolar Disorder.
- Produced interactive graphics for modules.
- Filmed, edited and conducted interviews for “Patient Perspective” videos that were embedded into the modules.

**Videographer and Designer***September 2014 - April 2015 (work study)*

Genetics Counseling, BC Children’s and Women’s Hospital (Vancouver, Canada)

- Acted as a lead designer for an online genetics counseling decision aid.
- Produced, directed, edited videos explaining important information pertaining to getting one’s genome sequenced.

**Science Game Designer***May 2014 - September 2014 (work study)*

Michael Smith Labs, UBC (Vancouver, Canada)

- Designed gameplay and visual layouts for genetics-themed card game funded by the Genetics Society of America (GSA).
- Game was printed and distributed to researchers at the The Allied Genetics Conference 2016.

**Director/Editor***May 2014 - June 2014 (contract)*

Telus/Public Records (Vancouver, Canada)

- Awarded a \$7000 budget from Telus/Public Records to produce a music video for the indie rock band the Ruffled Feathers.
- Managed a 10-person professional production crew.
- Edited and delivered final video on time and on budget.
- Video aired on Telus Optics TV.

**VOLUNTEER WORK****Computer coding instructor** - Green Timbers Elementary (Vancouver, Canada)*July 2016:* Help to design and run a coding workshop for kids.**Programming Assistant** - Telus World of Science (Vancouver, Canada)*September 2013 - May 2014:* Helped to design and facilitate science exhibits for kids.**ONLINE PORTFOLIO**Please visit [sammackinnon.ca/portfolio.html](http://sammackinnon.ca/portfolio.html) to see more of my work.

*References available on request*