

Marc Cataford

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GITHUB [mcataford](#) LINKEDIN [marccataford](#)

Education	McGill University BACHELOR OF ENGINEERING - COMPUTER ENGINEERING (GRADUATING MAY 2018) Relevant Coursework: Human-computer interaction, Embedded systems, Computer organization and architecture, Microprocessor systems, Computer architecture laboratory	2013-Present
Skills	Languages: Fully bilingual French/English Programming: Python, Java, C/C++, HTML5/CSS3, Javascript, PHP Frameworks: Flask, NodeJS, Django, Wordpress, Google Firebase Tools: MATLAB/Octave, LabVIEW	
Experience	Chairperson of the Board of Directors THE DAILY PUBLICATIONS SOCIETY Organize and facilitate bi-monthly meetings of the board Chair of the continuation and improvement, fundraising and referendum practices committees Coordinated the quinquennial funding referendum which secured 1.5M\$ over five years Negotiated a new lease with the Students' Society of McGill University, leading to 45% savings in rent costs Brokered a new Memorandum of Agreement with McGill University Administration to define the organization's status on campus for the next five years	Jul. 2017 - Present
	Web developer (Clubs and services) STUDENTS' SOCIETY OF MCGILL UNIVERSITY Design and implement Wordpress-based solutions for student clubs and services based on creative meetings with their executives Provide support and training for executives to manage their websites independently Troubleshoot sites built with Wordpress, Django, and other frameworks	Jan. 2017 - Present
	Freelance web developer SELF-EMPLOYED Maintain good, lasting relationships with 10+ clients in the Montreal area Build custom Wordpress/Woocommerce solutions to boost clients' web presence and meet their e-commerce needs Provide training and documentation to help clients manage their properties autonomously	Jan. 2016 - Present
	Programming Tutor CHEGG TUTORS INC. Provided help to hundreds of students, earning 320+ positive reviews Wrote customized lesson material for Java, C, C++, Python, PHP, Javascript, Assembly (Intel IA-32/x64, MIPS and ARM) and NodeJS	Apr. 2013 - Present
	Programming Instructor STUDENTS' SOCIETY OF MCGILL UNIVERSITY Designed material for 8-week courses on Python, Java and web development Held weekly hour-long lectures to 3-6 groups of 15-25 students Taught over four consecutive semesters	Sept. 2016 - Dec. 2017

Projects

TB2: Implementing a real-time news game engine

Sept. 2017 - Present

UNITY, C#, PYTHON, DATA MINING, NATURAL LANGUAGE PROCESSING

In collaboration with The Pulitzer Centre

Updated the TB2 game C# codebase (stale since 2013)

Implemented a Django Python server to handle fetching and filtering news content, and facilitate dynamic insertion into game clients

Modified game code to allow fetching and integration of new content at runtime

SITE: <http://pulitzercenter.org/reporting/tb2-malis-ancient-manuscripts>

PlainerEmail

Nov. 2017 - Present

NODEJS, ELECTRON

Commissioned by Associate Prof. Derek Nowrouzezahrai

Enhancement of Plain-Email, an open source email client to allow usage with McGill University's email

SITE: <https://github.com/mcataford/plainer-email>

MIPS64 CPU

Jan. 2017 - Apr. 2017

VHDL

Implemented a fully-functional single-core CPU capable of interpreting all non-floating MIPS64 instructions

Implemented basic branch prediction and hazard detection

Teaching resources

Sept. 2016 - Present

JAVA, PYTHON, HTML5, CSS3, JUPYTER

Built open-source educational material based on classes I've taught

Planning on using this material to launch independent teaching program

SITE: <https://github.com/mcataford/Learning>