Marc Cataford

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Education	**McGill University**	2013-Present

McGill University — 2013-Present
BACHELOR OF ENGINEERING - COMPUTER ENGINEERING (GRADUATING MAY 2018)

Relevant Coursework: Human-computer interaction, Embedded systems, Computer organization and architecture, Microprocessor systems, Computer architecture laboratory

Skills

Languages: Fully bilingual French/English
Systems programming: Python, Java, C/C++
Web development: HTML5, CSS3, Javascript, PHP
Frameworks: Flask, NodeJS, Django, Wordpress
Tools: MATLAB/Octave, LabVIEW

Experience

Chairperson of the Board of Directors   Jul. 2017 - Present
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 quintennial 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 renting costs
Brokered a new Memorandum of Agreement with McGill University Administration to define the organization's status on campus for the next five years

Web developer (Clubs and services)   Jan. 2017 - Present
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

Freelance web developer   Jan. 2016 - Present
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

Programming Tutor   Apr. 2013 - Present
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

Programming Instructor   Sept. 2016 - Dec. 2017
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

Projects	**TB2: Implementing a real-time news game engine**	Sept. 2017 - Present

TB2: Implementing a real-time news game engine
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