Steven Wu

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Education

MSc Statistics:
Under supervision of Graduate Chair Dr. Tim Swartz (Co-op Option) ***Sept 2015 – TBD***
Simon Fraser University, Burnaby BC

- 4.07/4.33 (Letter Grade: A): NSERC CGS-M, Special Entrance Scholarship, Graduate Fellowship

Bachelor of Mathematics Honours:
Computational and Applied Mathematics and Statistics (Co-op Option) ***Sept 2010 – May 2015***
Carleton University, Ottawa ON

- 10.7/12.0 (Letter Grade: A-): Dean's List 2010-2015

Relevant Coursework: Machine Learning, Data Mining, Artificial Intelligence, Spatial Statistics, Time Series Analysis, Statistical Computing, Software Engineering, Web Development

Technologies and Skills

- Proficient: Python, Java (Spring, Hibernate, Maven), R, Git/SVN, MongoDB, LaTeX
- Intermediate: PostgreSQL, Flask, HTML, CSS, UNIX, Amazon Web Services (AWS), D3.js, jQuery
- Familiar: MATLAB, JavaScript, C, C++, SAS, MINITAB

Tech Work Experience

Research & Development Intern	MDA Ltd.	Summer 2016 – Fall 2016
Technical Services Developer	360pi	Summer 2015
Writer (Data Science)	Carleton CQADS	Winter 2015
QA Automation	360pi	Summer 2013 – Summer 2014
QA Analyst	360pi	Summer 2012

Highlights of Work Experience

- Designed and implemented (1) REST API wrappers that expose R&D algorithms and (2) an Analytics web service that connects the wrappers to an existing web app, for clients of MDA who regularly use Canada's RADARSAT-2 data
- Worked on infrastructure & web crawlers to parse product information on retailer websites
- Experienced a Kanban system that required problem solving and multi-tasking, implementing software solutions to customer specific requests or bugs of varying priorities independently
- Implemented on-demand job creation for internal QA Tool; designed new schema, proper handling of new type of jobs, created new UIs, and updated the reports display

Relevant Projects

Full Stack Programming Projects

SeeCIS (seecis.com) (Python, MongoDB, Flask, D3) *Sept 2013 – Now*

- SeeCIS is a web app targeted for CIS basketball coaches that I made from scratch
- Scrapes play-by-play, box scores, and player information for any available CIS season
- Cleans the play-by-play using AI algorithms that considers contextual information

- Produces new metrics using the play-by-play such as +/-, % of contributions when scoring margin is within x, % of contributions in the 4th quarter, to name a few
- Implemented system for matching misspelled names across seasons to allow career analysis

Forum Scraper for Sentiment Analysis (Python, MongoDB, Flask) *Feb 2015*

- Demo link available: stevenwu.pythonanywhere.com
- Prototype of my NSERC thesis which can crawl RealGM's NBA Draft board
- Representations of posts, threads, and users for each post in each topic stored in a database
- Displays various summarizing data using text analytics with a web interface

Programming Projects for Paying Clients

NHL Trades and Trust Research (R, Python, Pandas, Networkx, LaTeX) *Oct 2015*

- Wrote software (data manipulation, variable creation, model building using log-linear models, handling overdispersion) to implement proof of concept requested by client
- Given a tight deadline of less than 10 days, delivered a written and oral presentation with strong positive feedback and a follow-up request for more work
- Negotiated my own rate and hours, working independently to complete the task

CFL Data (Python, MongoDB) *Feb 2015 – Mar 2015*

- Created system in Python to scrape a given season of CFL play-by-play game data, store in a database, and collect all 3rd down plays that did not end in a punt for later analysis
- Sold articles that use the codebase as a reference for tutorials on data analysis for Carleton's Centre of Quantitative Analysis and Decision Support

Hackathon Programming Projects

Receiver Entropy Visualizer (R, Shiny) for MIT Sloan Conference 2016

- Created a Shiny app in R that analyzed video data from a football game to produce (1) heatmaps of movement for offensive receivers and (2) an entropy score to reflect unpredictability, given 6 hours to work individually

@astro_tweet_bot – twitter.com/astro_tweet_bot (Python, Flask) for NASA Hackathon 2014

- Twitter bot that reads tweets from sky-gazing enthusiasts and responds with observable sky phenomena, built and deployed live for 2014 NASA Hackathon in two days with two others
- Identified sources of useful information, tonightssky.com and spaceweather.com/flybys, developed scrapers that take the website's information depending on the user's request

Communication Experience

Teaching Assistant (15 courses)	Carleton, SFU	Fall 2012 – present
Event Coordinator, TSSU Rep	OTTanalytics	Fall 2015 – present
Organizer	CUMC 2014	January 2015
Head of Logistics & Volunteers	Carleton University	Summer 2013 – Summer 2014
Co-op Peer Helper	Carleton University	Fall 2012 – Winter 2013
Campus Tour Guide	Carleton University	Fall 2012 – Fall 2013
Speaker (Blackjack, SportVU)	CUMC 2012, 2013	Summer 2012, Summer 2013
Tutor	Self-Employed	Summer 2008 - present