Celia Siu

http://csiu.github.io

EDUCATION

Master of Science, Bioinformatics   Sept.2014 – Present
- University of British Columbia, Vancouver, BC
- Funded by CIHR and the CGS-M (see Awards section)
- Expected graduation, May 2017

Bachelor of Science, Biochemistry   Sept.2008 – May.2013
- University of British Columbia, Vancouver, BC
- Completed the Co-operative Education Program

AWARDS

2016 🏆 **CEEHRC Travel Award recipient**
> Awarded $1,000 for the cost of travel to present at the ISMB 2016 conference in Orlando, Florida.

2016 🏆 **John Bosdet Memorial Fund**

2015 🏆 **Canada Graduate Scholarship Masters Award (CGS-M) recipient**
> Administered by the Tri-Council Agencies (NSERC, SSHRC, CIHR), the CGS-M is a one year, non-renewable research training award valued at $17,500 to support students who demonstrate a high standard of achievement in undergraduate and early graduate studies.

2014 🏆 **CIHR Strategic Training in Health Research Award recipient**
> Awarded a two-year ($22,000/year) funding for M.Sc. training in Bioinformatics.

2013 🏆 **NSERC Undergraduate Student Research Award**

2008 🏆 **UBC President's Entrance Scholarship**
> This one-time funding of $2,000 is to support academically qualified students who show an interest in joining the UBC community.

PUBLICATIONS

Co-authored in:
- McPherson et al. (2016) Divergent modes of clonal spread and intraperitoneal mixing in high-grade serous ovarian cancer. *Nature Genetics*. doi:10.1038/ng.3573
- Eirew et al. (2015) Dynamics of genomic clones in breast cancer patient xenografts at single-cell resolution. *Nature, 518*(7539):422-6. doi: 10.1038/nature13952
- Leon et al. (2012) Application and evaluation of automated methods to extract neuroanatomical connectivity statements from free text. *Bioinformatics, 28*(22):2963-70. doi: 10.1093/bioinformatics/bts542

Acknowledged in:

- Zoubarev et al. (2012) Gemma: a resource for the reuse, sharing and meta-analysis of expression profiling data. *Bioinformatics, 28*(17):2272-3. doi: 10.1093/bioinformatics/bts430

PRESENTATIONS

Poster presentation, Intelligent Systems for Molecular Biology (ISMB) 2016 Conference	July 9 & 10, 2016
Poster presentation, BTP/IOP/GSAT 2016 Retreat	March 11, 2016
Oral presentation, Bioinformatics Research Rotation Presentation	July 24, 2015
Oral presentation, Bioinformatics Research Rotation Presentation	March 27, 2015
Oral presentation, Bioinformatics Research Rotation Presentation	November 28, 2014

PROJECTS

Characterization of the human thyroid epigenome   Sept.2015 – Present
Jones Lab, Michael Smith Genome Sciences Centre
- Modelled chromatin states from epigenetic features using hidden Markov models to produce 26 candidate models
- Developed a new model selection criterion
- Used Makefiles to create pipelines, organize code, and rerun analyses

Literature-based knowledge discovery of biomedical text   May.2015 – Aug.2015
Jones Lab, Michael Smith Genome Sciences Centre
- Contributed to the development of text mining and machine learning approaches to prioritize therapeutics from Medline abstracts and the full-text of open access papers
- Visualized the output of MySQL database queries in R and D3

miRNA promoter recognition with CAGE and sRNA-seq   Jan.2015 – Apr.2015
Wasserman Lab, Centre for Molecular Medicine and Therapeutics
- Modified a miRNA promoter recognition method to include a new feature in Python
- Evaluated a semi supervised statistical model trained on CAGE data, DNA sequence features, and sRNA-sequencing data

Primer Data Extraction & Blast API   Sept.2014 – Dec.2014
Daley Lab, Centre for Heart Lung Innovation
- Used data mining to extract primers sequences from academic papers
- Made API calls to programmatically submit BLAST searches of primer sequences

EMPLOYMENT HISTORY

BCCRC | The University of British Columbia   Jan.2014 – Aug.2014
Research Assistant at the Shah Lab
- Wrote Bash, Python, and R scripts for downstream analysis and pipeline development
- Produced figures and limited text suitable for scientific manuscripts
- Optimized analyses by leveraging parallel computing on compute clusters

BCCRC | Provincial Health Services Authority   Sept.2013 – Dec.2013
Research Intern at the Shah Lab
- Ran automated analysis pipelines for data processing and data generation
- Wrote scripts to rename files, parse data, and wrap third party software
- Documented protocols, results, and comments on platforms such as the Atlassian Confluence wiki and Jira issue tracker

NSERC Undergraduate Student Research Award   May.2013 – Aug.2013
Undergraduate Summer Research Student in the UBC Department of Statistics
- Contributed to the collaborative development of an R package using Git and Github
- Validated code integrity by writing and running unit tests

UBC Centre for High-throughput Biology   May.2012 – Aug.2012
System Administrator Assistant
- Produced and updated protocols for internal use and for end users
- Setup user accounts on desktops, servers, and wikis
- Monitored, backed up, and performed various system administrative tasks using Nagios, Bacula, CFengine, and Request Tracker

UBC Centre for High-throughput Biology   Sept.2011 – Apr.2012
Bioinformatics Research Assistant at the Pavlidis Lab
- Annotated Gene Expression Omnibus datasets that were to be imported with ontology terms
- Evaluated software across multiple operating systems and reported issues on BugZilla
- Assessed the quality of microarray data for the FishManOmics project headed by the Department of Fisheries and Oceans Canada

Biofine International Inc.   May.2011 – Aug.2011
Organic Chemistry Synthesis Laboratory Assistant
- Verbally communicated with supervisors to receive instructions for the execution of experiments
- Researched, experimented, and evaluated the method of Marfey's reaction for enantiomeric resolution of amino acids
- Multitasked in coordination between executing experiments, keeping records, restocking supplies, and cleaning glassware

A&W Food Services of Canada   July.2007 – Oct.2010
Cashier
- Provided excellent customer service by responding in a timely manner, listening to what the customer has to say, and keeping an upbeat positive attitude
- Took initiative to find extra tasks when scheduled duties were completed

Pacific National Exhibition   Fair time
Concessions Attendant at Triple-O's in August 2006, 2007, 2008, and 2009
- Maintained high standards of customer service during high-volume, fast-paced operations
- Handled currency and credit transactions quickly and accurately

VOLUNTEER EXPERIENCE

Helper, **Software Carpentry workshop**   Oct.2016 & Feb.2017
- Troubleshot and helped students learn Git, GitHub, Bash, Python, and Jupyter Notebook

Wayfinder & Healthy Heart Resource Centre Clerk, **St. Paul's Hospital**   Feb.2013 – Aug.2013
- Approached, greeted, and helped patients and visitors find their way
- Welcomed and provided information and assistance to visitors of the resource centre