

Marc Laforet

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EDUCATION

Masters of Science – Biochemistry with bioinformatics **2014 – June 2016**

Western University, London, Ontario

- My thesis focused on predicting DNA-protein interactions based on an interaction dataset that I collected and performed statistical analysis on.
- Wrote custom scripts to mine NCBI databases and synthesize custom datasets of interest.
- Calculated Mutual Information (MI) between dataframe columns and identified significant outliers using a Z-score procedure.
- Determined analysis sensitivity (false positives) by implementing custom scripts to analyze 23 GB of randomly generated sequence data.
- Used molecular biology techniques to validate statistically significant results.
- Analyzed Next-Generation Sequencing (NGS) data (~ 6 GB).

Bachelor of Science – Honors Specialization in Biochemistry and Cell Biology **2010 – 2014**

Western University, London, Ontario

- Gold Medal Recipient (highest GPA from graduating class)

CODING SKILLS

Languages (order of proficiency): R, Python, Bash, Perl, SQL, Git, HTML5, CSS and Ruby

Frameworks and Libraries: dplyr, ggplot2, Pandas, scikit-learn, Heroku and Bokeh

PERSONAL PROJECTS

T-test visualization **2015**

- A real-time visualization that updates the p-value of the students T-test given sample means and standard deviations determined by the user (Shiny and dplyr – R).

Model titanic dataset **2015**

- Implemented and optimized a K-nearest neighbors classification model with cross-validation to predict survival (scikit-learn and Pandas – Python).

SOFT SKILLS

Teaching Assistant (TA) **Fall/Winter 2015 – 2016**

Western University, London, Ontario

- Biochemical regulation (Fall) and Laboratory (Winter) – 3rd year Biochemistry

Campus Program Coordinator – Leave the Pack Behind **Fall/Winter 2013 – 2014**

Western University, London, Ontario

- Managed a team of 30 volunteers
- Coordinated three campus wide smoking cessation campaigns
- Liaison between campus health services and head office personal

Varsity Athlete - Water-polo **Fall/Winter 2011 – 2012**

Western University, London, Ontario

- Purple color award – athlete that shows dedication to the team