

LI MCCARTHY

Boston, MA

(650) 815 - 1339 ◊ c.li.mccarthy@gmail.com

EDUCATION

NORTHEASTERN UNIVERSITY, KHOURY COLLEGE OF COMPUTER SCIENCES Expected Dec 2020
Candidate for MS, Computer Science, GPA: 3.79/4.0 *Boston, MA/Remote*

Specialization in Data Science

NORTHEASTERN UNIVERSITY, COLLEGE OF SCIENCE

BS, Behavioral Neuroscience, GPA: 3.49/4.0

2012-2017

John Armington Memorial Award for Visual Psychophysics

TECHNICAL KNOWLEDGE

Languages Python, Java, MATLAB, C, MySQL, HTML, CSS, JavaScript

Tools Git, Maven, TensorFlow, Scikit-learn, LaTeX, Bitbucket, GitHub, JIRA, Confluence

WORK EXPERIENCE

Co-op Software Engineer / Software Engineer I

May - Dec 2019 / Jan 2020 - Present

Nanoview Biosciences

Brighton, MA

- Development for customer-facing data analysis software
- Write and troubleshoot code that controls scanning of nanoparticle samples on flagship instrument
- Gather, analyze, and visualize data related to internal experiments to share company-wide
- Facilitate communication with research team to satisfy their quality and feature requirements

Graduate Teaching Assistant

Apr - Aug 2018

Northeastern University, Khoury College of Computer Sciences

Boston, MA

- Instructed on topics such as object-oriented design patterns and testing strategies during lab sessions

Co-op Research Assistant / Intern

Jul - Dec 2016 / Jun - Sep 2017

Moderna Therapeutics

Cambridge, MA

- Developed and optimized assays for the study of preclinical usage of novel mRNA technology, transitioning preclinical research project from *in vitro* screening to endpoints in vivo
- Presented annual company-wide internal research posters, monthly research unit status updates.

Research Assistant

Dec 2013 - Apr 2017

Northeastern University

Boston, MA

- Measured photoreceptor color detection and discrimination with experiments in MATLAB and analysis in Mathematica for the study of models of higher-order visual processing

ACADEMIC PROJECTS

Web-Based Lab Assistant

Present

Web Development

- Webapp aggregating useful tools for bench scientists, including dilution calculation and multi-well plate planning.
- Using REACT framework, version control using git.

Perturbation Research Database

Jan-Apr 2019

Database Management

- Designed a MySQL database to hold data obtained from the Broad Institute CMap dataset cross-referencing disease, cell line, gene, tissue, and perturbation with publications.
- Designed front-end in PyQt5

PUBLICATIONS

Understanding CRY2 interactions for optical control of intracellular signaling.

Duan, L., Hope, J., Ong, Q., Lou, H., Kim, N., McCarthy, C., Acero, V., Lin, M., and Cui, B. (2017). *Nat Comm* 8(1):547

A model of selective masking in chromatic detection.

Shepard, T.G., Swanson, E.A., McCarthy, C.L., Eskew, R.T. Jr. (2016). *J Vis* 16(9):3