

Kathleen A. Newcomer

kathleen.a.newcomer@gmail.com

636-236-3569

Work Experience

Associate Computational Biologist

September 2018 – Present

Dana Farber Cancer Institute, Boston MA

- Analyzed single cell RNA sequencing and bulk RNA sequencing data sets
- Created visualizations of results to allow non-computational collaborators to explore the data
- Developed a pathway analysis pipeline to determine the relationship significance between a given gene set and annotated gene sets from online databases and the literature
- Provided pathway analysis results for most projects throughout the lab
- Integrated TCGA breast cancer data into analyses to show correlations between human data and murine models
- Balanced several projects to meet deadlines for all project teams
- Organized lab meetings, including speakers, as well as interviews with applicants

Scientific Computing Co-op

January 2017 – June 2017

GlaxoSmithKline, Waltham MA

- Designed and developed program to identify RNA sequences that bind to ELT targets
- Increased performance and verified accuracy of existing processes in pipeline
- Developed program to differentiate ELT binding, and integrated into existing pipeline

Application Development Co-op

January 2016 – June 2016

MCPHS University, Boston MA

- Implemented improvements to existing functions for internal student management application
- Built new data displays, including writing SQL calls to student database
- Ran test and production builds using PowerBuilder

Leadership Experience

Northeastern University, Boston, MA

September 2015 – December 2015

Tutor for Fundamentals of Computer Science

- Graded weekly homework assignments and assisted in running a lab
- Held weekly office hours to help students with questions

Northeastern University Ballroom Dance Club, Boston MA

January 2015 – May 2018

Various roles

- President – Facilitated executive and general meetings; budgeting and strategic planning; interfaced with coaches and university offices
- Vice president – Organized demonstration performances; lesson scheduling and teacher assignments
- Social Chair – Planned membership drive events and team bonding events
- General member – Taught beginner lessons; provided support for newer members

Publications

In Submission

Present

Ivy X. Chen, **Kathleen Newcomer**, Vikram R. Juneja, Kamila Naxerova, Kristen Pauken, Michelle W. Wu, Matthias Pinter, Meromit Singer, Arlene H. Sharpe, Rakesh K. Jain. A bilateral tumor model identifies transcriptional programs that associated with patient response

(Continues on next page)

Kathleen A. Newcomer

kathleen.a.newcomer@gmail.com

636-236-3569

Education

Northeastern University, Boston, MA

Bachelor of Science in Computer Science and Biology, minor in Mathematics

May 2018

GPA: 3.58 / 4.00

Honors & Awards: National Merit Scholarship, University Honors Program

Relevant Courses: Bioinformatics Computational Methods I & II, Software Development, Information Visualization, Biochemistry, Algorithms & Data, Statistics & Stochastic Processes, Genetics, Organic Chemistry I & II

Volunteer work: 100+ hours per year

Skills

Technology

Languages: R (ggplot2, DESeq2, Seurat), Python, Bash, Git, Java, SQL

Systems: Ubuntu; OS X; Windows: XP, 7, 8, 10

Software: R Studio, GSEA, Jupyter, Eclipse, IntelliJ, MySQL, Microsoft: Word, Excel, Powerpoint

Soft Skills

Communication: Persuasion, Verbal and Visual Communication, Emotional Intelligence

Problem Solving: Inquisitive, Analytical, Logical Reasoning, Spatial Reasoning

Leadership: People Management, Mentoring, Versatile, Organized

Work-Ethic: Collaborative, Competitive, Motivated