

# Gregory Raskind

✉ [graskind@umich.edu](mailto:graskind@umich.edu)

Programmer Analyst at the Michigan Center for Translational Pathology

## Education

### University of Michigan

2015 - 2019

Bachelors of Science in Biochemistry and Mathematical Biology

Minor in Computer Science

GPA: 3.939/4.000

*Relevant Coursework:*

*Bioinformatics Concepts and Algorithms, Differential Equations, Real Analysis, Linear Algebra, Multi-Variable Calculus, Probability, Combinatorics, Topology, Mathematical Modelling in Biology, Data Structures and Algorithms, Web Systems*

*Organic Chemistry I and II, Advanced Biochemistry I and II, Biophysical Chemistry, Brain Development, Mechanics, Electromagnetism, Introductory Statistical Methods*

## Publications

Zhang et al., "Single Cell Sequencing of Renal Carcinomas" (fourth author, manuscript in preparation)

## Research Experience

### Chinnaiyan Lab

Michigan Center for Translational Pathology (June 2018-Present)

- Performed bioinformatic analyses on a variety of big data sets, including bulk RNA sequencing data (e.g. GSEA) and whole genome sequencing data.
- Maintained, extended, and automated a pipeline for analyzing single cell RNA sequencing (scRNA-seq) data.
- Developed an interactive web application for annotating scRNA-seq data and performing differential expression analysis.
- Learned how to use, create, and interpret many common figures used in the analysis of sequencing data.
- Gained experience with docker, remote work, and cloud computing.
- Currently manage initial processing of scRNA-seq data and work with the single cell and bioinformatics groups on projects in Prostate and Kidney Cancer.

### Big Data Summer Institute (BDSI)

University of Michigan (June 2017 - August 2017)

- Assisted in the development of a genome assembly program.
- Attended a lecture series on various advanced topics in statistics, bio-statistics, computer science, and mathematics.
- Acquired programming techniques in C++, genome assembly, and different sequencing technologies.
- Built a DeBruijn graph of the human reference genome and a variant graph using FASTQ data for chromosome 22.
- Continued project after the conclusion of the institute, working on the program interface and error pruning of the variant graph for low coverage k-mers.

## Computer Skills

- Extensive knowledge of C++ through research and coursework.
- Proficiency in R along with working knowledge of a multitude of Bioconductor packages
- Web development (see <https://graskind.github.io/anitim-photography/> for an example).
- Experience with Linux, Python, JSON, JavaScript, HTML, Css, Bash scripting, Git, LaTeX, and R markdown

## Honors and Awards

### Phi Beta Kappa National Honor Society

2019 - Present

For "exceptional academic achievement in the arts and sciences"

### Outstanding Achievement in Mathematics Award

2019

For "excellent and consistent work in mathematics courses and contributions to the study of Mathematics at Michigan"

### Michigan Competitive Scholarship

2018

<b>McCarthy Family Scholarship</b>	2018
<b>Sophomore Honors Award</b>	2017
For "outstanding achievement and engagement in the first two years" of undergraduate education.	
<b>University Honors</b>	2015 - 2017
<b>Ginsberg Math Scholarship</b>	2017
<b>Mary Margaret Soderman Memorial Scholarchip</b>	2017
<b>James B. Angell Scholar</b>	2017/2018
<b>William J. Branstrom Freshman Prize</b>	2016

## Jobs

---

<b>Camp Counselor</b>	June 2019 - August 2019
Michigan Math and Science Scholars	
<ul style="list-style-type: none"> <li>Planned and led activities with campers.</li> <li>Was responsible for 10-18 kids in three separate sessions.</li> </ul>	
<b>Tutor</b>	June 2018 - Present
Varsity Tutors	
<ul style="list-style-type: none"> <li>Worked one-on-one with students in various subjects such as Algebra 2, Calculus 1, Statistics, and Programming.</li> </ul>	
<b>Grader for Probability Course (Math/Stats 425)</b>	July 2018 - August 2018
University of Michigan Math Department	
<ul style="list-style-type: none"> <li>Determined problems to grade for correctness, assigned points, and input the grades for homework assignments.</li> </ul>	
<b>Grader for Introductory Statistics Course (Stats 250)</b>	Jan 2018 - April 2018
University of Michigan Statistics Department	
<ul style="list-style-type: none"> <li>Graded online homework for an Introductory Statistical Methods class with approximately 1,000 student enrolled.</li> <li>Proctored and graded exams.</li> </ul>	
<b>Math tutor</b>	Sept 2016 - April 2018
University of Michigan Math Lab	
<ul style="list-style-type: none"> <li>Tutored students in subjects ranging from Functions and Graphs to Differential Equations and Probability.</li> </ul>	

## Activities and Volunteer Work

---

<b>Laboratory Assistant</b>	June 2018 - August 2019
Chinnaiyan Lab	
<ul style="list-style-type: none"> <li>Worked full time as a volunteer at the Chinnaiyan Lab for two months before transitioning to a paid position.</li> </ul>	
<b>Volunteer Tutor</b>	January 2018 - April 2018
Wolverine Tutors	
<ul style="list-style-type: none"> <li>Volunteered at Pathways to Success Academic Campus to teach students from disadvantaged backgrounds high school chemistry.</li> </ul>	
<b>Mushing</b>	Sept 2013 - Dec 2015
Otter River Sled Dog Training Center and Wilderness Adventures	
<ul style="list-style-type: none"> <li>Fed, trained, and took care of dogs in a kennel that competed in sled-dog races.</li> <li>Finished 9th in the Copper Dog 40.</li> </ul>	

## Languages

---

- Russian - Native language, fluent
- English - Fluent
- Spanish - Some elementary conversation