

Curriculum Vitae - Ivan P. Ramler

1 Contact Information

Ivan P. Ramler

Department of Mathematics, Computer Science, and Statistics St. Lawrence University

Email: iramler@stlawu.edu

[Google Scholar](#)

2 Education

Ph.D. in Statistics – Iowa State University, 2008

Dissertation: *Improved statistical methods for k-means clustering of noisy and directional data* Advisor: Dr. Ranjan Maitra

M.S. in Statistics – Iowa State University, 2004

Thesis: *Testing for Clustering in Univariate Directional Data with Applications to North Dakota Predator Movement Patterns*

Advisor: Dr. Tapabrata Maiti

B.A. in Mathematics and Statistics – University of Minnesota – Morris, 2002 (Minor: Economics)

3 Academic Appointments

St. Lawrence University – Canton, NY

- **Jack and Sylvia Burry Associate Professor of Statistics**, 2021–present
- **Associate Professor of Statistics (Tenured)**, 2015–2021
- **Assistant Professor of Statistics**, 2011–2015
- **Visiting Assistant Professor of Statistics**, 2009–2011
- **Adjunct Assistant Professor of Statistics**, Spring 2009

Courses Taught at St. Lawrence University:

- **STAT 113** – Introduction to Statistics
- **STAT 213** – Applied Regression Analysis
- **STAT 226** – Statistical Design and Analysis for Data Collection
- **STAT 234** – Foundations of Data Science
- **STAT 313** – Advanced Linear Models
- **STAT 325** – Probability

- **STAT 326** – Mathematical Statistics
 - **CS 140** – Introduction to Computer Programming
 - **Senior Capstone Projects and Seminars** – Statistics and Data Science majors
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4 Peer-Reviewed Journal Publications

Note: Items marked + indicate a student co-author.

Work Completed Post-tenure

1. **Ramler, I.**, Lee, C.S., +Strong, S. (2021). Investigating Match Performance Differences between Genders of League of Legends Champions. *Proceedings of the 16th International Conference on the Foundations of Digital Games (FDG'21)*. <https://doi.org/10.1145/3472538.3472549> (Acceptance rate - 38%)
2. Chapman, J., Hill, A., Nagel-Myers, J., and **Ramler, I.** (2019) “The Liberal Arts Science Scholars Program: A Multidisciplinary Model for Supporting STEM Students through the First Year.” *Journal of STEM Education* 20, 17. (Impact Factor - 1.4)
3. Lee, C.S. and **Ramler, I.** (2017). Identifying and Evaluating Successful Non-Meta Strategies in League of Legends. *Foundations of Digital Games (FDG)*. (*Best Paper Award*) (Acceptance rate - 40%)
4. +Jahne, M.A., Rogers, S.W., Holsen, T.M., Grimberg, S.J., **Ramler, I.**, and Kim, S. (2016). Bioaerosols Deposition to Food Crops Near Manure Application: Quantitative Microbial Risk Assessment. *Journal of Environmental Quality*, 45(2), 666–674. <https://doi.org/10.2134/jeq2015.04.0187> (Impact Factor - 2.3, Acceptance Rate – 30%)
5. Chaplin-Kramer, R., **Ramler, I.**, Sharp, R., Haddad, N., Gerber, J., West, P., Mandle, L., Engstrom, P., Baccini, A., Sim, S., Mueller, C., and King, H. (2015). Degradation in Carbon Stocks Near Tropical Forest Edges. *Nature Communications*, 6:10158. <https://doi.org/10.1038/ncomms10158> (Impact Factor – 15.7)
6. Lee, C.S. and **Ramler, I.** (2015). Rise of the Bots: Bot Prevalence and Its Impact on Match Outcomes in League of Legends. *2015 International Workshop on Network and Systems Support for Games (NetGames)*pp. 1-6. <https://doi.org/10.1109/NetGames.2015.7382992> (Acceptance rate - 35%)
7. +Jahne, M., Rogers, S., Holsen, T., Grimberg, S., **Ramler, I.** (2015). Emission and Dispersion of Bioaerosols from Manure Application Sites: Human Health Risk Assessment. *Environmental Science & Technology*, 49, 9842–9849. (Impact Factor – 11.3)
8. Lee, C.S. and **Ramler, I.** (2015). Investigating the Impact of Game Features and Content on Champion Usage in League of Legends. *Proceedings of Foundations of Digital Games (FDG)*. (Acceptance rate – 36.6%)

Work Completed Pre-tenure

9. +Jahne, M., Rogers, S., **Ramler, I.**, Holder, E., and Hayes, G. (2015). Hierarchical Clustering Yields Insight into Multidrug-Resistant Bacteria Isolated from Cattle Feedlot Wastewater. *Environmental Monitoring and Assessment*, 187:4168. <https://doi.org/10.1007/s10661-014-4168-9> (Impact Factor – 3.0)
 10. Chaplin-Kramer, R., Sharp, R., Mandle, L., Sim, S., Johnson, J., Butnar, I., Mila i Canals, L., Eichelberger, B., **Ramler, I.**, Mueller, C., McLachlan, N., Yousefi, A., King, H., Kareiva, P. (2015). Spatial Patterns of Agricultural Expansion Determine Impacts on Biodiversity and Carbon Storage. *PNAS*, 112(24), 7402–7407. (Impact Factor – 9.1)
 11. **Ramler, I.P.**, and Chapman, J.L. (2011). Introducing Statistical Research to Undergraduate Mathematical Statistics Students using the Guitar Hero Video Game Series. *Journal of Statistics Education*, 19(3). (Impact Factor – 1.6)
 12. Willson, S., Sharp, R., **Ramler, I.P.**, and +Sen, A. (2011). Spatial Movement Pattern Optimization in Amazonian Eciton burchellii Army Ants. *Insectes Sociaux*, 58, 325–334. (Impact Factor – 1.5)
 13. Maitra, R., and **Ramler, I.P.** (2010). A k-mean-directions Algorithm for Fast Clustering of Data on the Sphere. *Journal of Computational and Graphical Statistics*, 19(2), 377–396. (Impact Factor – 1.8)
 14. Maitra, R., and **Ramler, I.P.** (2009). Clustering in the Presence of Scatter. *Biometrics*, 65, 341–352. (Impact Factor – 2.3)
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5 Refereed and Invited Scholarly Contributions

Work Completed Post-tenure

1. Chapman, J., and **Ramler, I.** (2026, April 10). Creating mentored research opportunities for first-year students. AAAS S-STEM REC. <https://sstemrec.aaas.org/blog/creating-mentored-research-opportunities-for-first-year-students/> (Invited, editorially reviewed)
2. **Ramler, I.** (2025). “Engaging Students with Sports Data: The SCORE Network Approach to Statistics and Data Science Education.” *StatTLC: Statistics Teaching and Learning Corner*. (Invited, editorially reviewed)
3. Lee, C.S. and **Ramler, I.** (2019). *A Data Science Approach to Exploring Hero Roles in Multiplayer Online Battle Arena Games*. In **Data Analytics Applications in Gaming and Entertainment**, CRC Press, Chapter 4, pp. 50–78. (Invited and peer-reviewed book chapter)

6 Peer-Reviewed Educational Modules (SCORE Network)

Each module undergoes review by an editor, associate editor, pedagogy reviewer, and content/industry expert as part of the SCORE Network’s peer-review process.

Note: Items marked with + indicate a student co-author.

Post-tenure

1. +Karadenes, B., **Ramler, I.**, Lock, R. (2026). *Women’s 100m Olympic Swimming: Comparing Strokes and Eras* [Module](#)
2. +Johnson, V., **Ramler, I.** (2026). *Strength Ratios – Flat Dumbbell Press to Barbell Bench Press*. “The SCORE Network.” [Module](#) | [DOI](#)
3. +Rhinehart, F., **Ramler, I.**, Chapman, J. (2025). *Pickleball: Estimating the proportion of dependable DUPR ratings*. “The SCORE Network.” [Module](#) | [DOI](#)
4. +Smith, A., Lock, R., **Ramler, I.** (2025). *Olympic Rowing Medals Between 1900 and 2022 – Data Wrangling*. “The SCORE Network.” [Module](#) | [DOI](#)
5. +Smith, A., Lock, R., **Ramler, I.** (2025). *Olympic Rowing Medals Between 1900 and 2022 – Summary Statistics*. “The SCORE Network.” [Module](#) | [DOI](#)
6. **Ramler, I.**, +Charalambous, G., Dykstra, A.J. (2024). *League of Legends – Buffing and Nerfing*. “The SCORE Network.” [Module](#) | [DOI](#)
7. **Ramler, I.**, +Fay, J. (2024). *2023 Boston Marathon – Variability in Finish Times*. “The SCORE Network.” [Module](#)
8. Dykstra, A.J., **Ramler, I.** (2024). *Ironman Triathlon (Canadian Females) – Multiple Linear Regression*. “The SCORE Network.” [Module](#) | [DOI](#)
9. +Fay, J., **Ramler, I.**, Dykstra, A.J. (2024). *Lacrosse Faceoff Proportions*. “The SCORE Network.” [Module](#) | [DOI](#)
10. +Bigness, A., **Ramler, I.**, +Fay, J. (2024). *NASCAR Transformation Module*. “The SCORE Network.” [Module](#) | [DOI](#)
11. +Cowan, A., **Ramler, I.**, Dykstra, A.J., Lock, R. (2024). *Lacrosse PLL vs. NLL*. “The SCORE Network.” [Module](#)

7 Grants

7.1 Funded Grants

Grant Completed Post-tenure

1. **Senior Personnel** (2022-current) NSF Award #2142705 (2022–2026).
Building a Sustainable National Network for Developing and Disseminating Sports Content for Outreach, Research, and Education in Data Science.
PI: R. Nugent (Carnegie Mellon). Total Award: \$1,100,000.
2. **Co-Principal Investigator**, NSF Award #1930380 (2020–2025).
S-STEM: Increasing Accessibility to the Sciences through Mentoring Networks, Research Experiences, and Scholarships.
PI: J. Chapman. Total Award: \$999,910.

3. **Co-Principal Investigator**, NSF Award #1807502 (2018).
Hudson River Undergraduate Mathematics Conference 2018.
 PI: M. Schuckers. Total Award: \$13,886.
4. **Co-Principal Investigator**, NSF Award #1458712 (2015–2020).
S-STEM: Liberal Arts Science Scholars.
 PI: J. Chapman. Total Award: \$618,524.

Grant Completed Pre-tenure

5. **Senior Personnel**, NSF Award #0959713 (2010–2013).
MRI-R2: Acquisition of High Performance Computer and Microarray Scanner for Interdisciplinary Research in Computer Science and Biology at St. Lawrence University.
 PI: E. Harcourt. Total Award: \$179,336.
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8 Other Publications

8.1 Conference Proceedings (Not Peer-Reviewed)

Work Completed Post-tenure

1. **Ramler, I.**, Lee, C.S., and Schuckers, M. (2019). Identifying Symbiotic Relationships between Champions in *League of Legends*. *Proceedings for the 2019 Joint Statistical Meetings, Sports Statistics Section*. Alexandria, VA: American Statistical Association, 2362–2369.

Work Completed Pre-tenure

2. **Ramler, I.P.** (2012). An Analysis of Beer Styles. *Proceedings of the 2012 Joint Statistical Meetings*, 2513–2523.
3. **Ramler, I.P.** (2010). Introducing Statistical Research to Undergraduate Mathematical Statistics Students using the Video Game Series, *Guitar Hero*. *Proceedings of the 2010 Joint Statistical Meetings*, 5359–5370. (*Precursor to Journal of Statistics Education article.*)

8.2 Book Chapters (Not Peer-Reviewed)

Work Completed Pre-tenure

1. Willson, S.K., Sharp, R., **Ramler, I.**, and Sen, A. (2013). Spatial Movement Optimization in Amazonian *Eciton burchellii* Army Ants (translated into Spanish). In *Reporte Manu 2013: Pasión por la Investigación en la Amazonia Peruana*, Chapter 2, pp. 156–177. San Diego Zoo Global Publications.

8.3 Book Reviews

Pre-tenure

1. **Ramler, I.P.** (2014). Review of *Introduction to Statistics Through Resampling Methods and R* by Phillip I. Good. *The American Statistician*, 68(1), 65.
2. **Ramler, I.P.** (2012). Review of *Practicing Statistics: Guided Investigations for the Second Course* by Shonda Kuiper and Jeffrey Sklar. *The American Statistician*, 66(3), 203.
3. **Ramler, I.P.** (2012). Review of *The R Primer* by Claus Thorn Ekstrom. *The American Statistician*, 66(2), 150.

9 Presentations

Post-tenure

Invited Talks and Panels

1. “Estimating Grass Orientation from Drone Images to Determine Wind Patterns.” Corning Statistical Practitioners’ Forum Series, Corning, NY, virtual, May 2026.
2. “Computer and Data Science Careers.” *Northern New York C/STEP Annual Career Exploration Symposium*, St. Lawrence University, September 2024.
3. Keynote Address: “How Data Science Made Me a Better Gamer.” *Mathematics Conference and Competition of Northern New York (MCCNNY)*, Potsdam, NY, February 29, 2020.
4. “Mentoring Undergraduate Research Panel.” *Hudson River Undergraduate Mathematics Conference (HRUMC)*, Canton, NY, April 2018.

Workshops and Breakout Sessions

1. **“Math and The New York Times.”** *Math & Everything (Women and Math Outreach Event)*, St. Lawrence University, Canton, NY, November 2025. Multiple 30-minute breakout sessions.
2. **“Strategies for Embedding Sports Data Across the Curriculum.”** 1.25-hour breakout session at *USCOTS 2025*, CAUSEweb, July 2025. Co-led with Nick Clark, Robin Lock, and Michael Schuckers.
3. **“Creating Interactive Modules for Teaching with Sports Data.”** 3-hour workshop at *USCOTS 2025*, CAUSEweb, July 2025. Co-led with Nick Clark, Robin Lock, and Michael Schuckers.
4. **“Math and TV: Using Data Science to Explore IMDb Ratings for TV Shows.”** *Math & Everything (Women and Math Outreach Event)*, St. Lawrence University, Canton, NY, September 2024. Multiple 30-minute breakout sessions.
5. **“Introduction to the Sports Content for Outreach, Research, and Education (SCORE) Network.”** 1.5-hour breakout session at *USCOTS 2023*, State College, PA, June 2023. Co-led with Michael Schuckers and Robin Lock.
6. **“Modules for Infusing Data Science into the Statistics Curriculum.”** Assisted workshop led by Adam Loy at *USCOTS 2017*, State College, PA, May 2017.

Other Conference Presentations

1. “Integrating Statistics and Data Science in an Interdisciplinary S-STEM Program at a Liberal Arts College” *USCOTS 2025*. Ames, IA, July 2025. Co-presented with J. Chapman
2. “The Liberal Arts Science Scholar Program at St. Lawrence University: Findings and Lessons Learned.” 2024 S-STEM Scholar and PI Meeting, Chicago, IL, November 2024. With Jessica Chapman, Erika Barthelmess, and Jessica Sierk.
3. “Creating Statistics and Data Science Education Modules for the SCORE Network.” *Electronic Conference on Teaching Statistics (eCOTS)*, June 2024. (Co-presented with Ron Yurko and Robin Lock)
4. “Bringing IMDb to the Classroom.” *Celebration of Scholarship and Creativity*, St. Lawrence University, March 2024.
5. “Creating Statistics and Data Science Education Modules for the SCORE Network.” *Joint Statistical Meetings*, Toronto, Canada, August 2023.
6. “Bringing IMDb to the Classroom.” *Joint Statistical Meetings*, Toronto, Canada, August 2023. (Co-presented with J. Chapman)
7. “Esports Analytics at SLU.” *Celebration of Scholarship and Creativity*, St. Lawrence University, January 2023.
8. “Investigating Match Performance Differences between Genders of League of Legends Champions.” *Foundations of Digital Games*, August 2021.
9. “Profiling Character Viability across Player Skill Levels in Esports Games.” *Rocky Mountain Symposium on Analytics in Sports*, Denver, CO, August 2019.
10. “Identifying Symbiotic Relationships between Champions in League of Legends.” *Joint Statistical Meetings*, Denver, CO, July 2019. (Presented by M. Schuckers)
11. “Identifying & Evaluating Successful Team Compositions in League of Legends.” *RIT Sports Analytics Conference*, Rochester, NY, August 2018.
12. “Not an Oxymoron: Liberal Arts Science Scholars.” *NSF STEM for All Video Showcase*, May 2018. [Video](#) (Jointly created with Jessica Chapman, Jeff Chiarenzelli, Adam Hill, and Judith Nagel-Myers)
13. “Implementing an Interdisciplinary NSF S-STEM Program at Small Liberal Arts Colleges.” *USCOTS 2017*, State College, PA, May 2017.
14. “DYOD (Download Your Own Data).” *USCOTS 2017*, State College, PA, May 2017. (Co-presented with R. Lock)
15. “Rise of the Bots: An Investigation of Illicit Bot Usage in League of Legends.” *NetGames 2015*, Zagreb, Croatia, December 2015.
16. “Modeling Carbon Edge Effects Detected by Remote Sensing across the Pantropics.” *Joint Statistical Meetings*, Seattle, WA, August 2015.

Pre-tenure

Invited Talks and Panels

1. “My Life as an Applied Statistician.” *Science and Mathematics Visiting Alumni Program Seminar Series*, University of Minnesota – Morris, April 2015. (Invited)
2. “An Introduction to Cluster Analysis with Applications to Time Series Microarray Experiments.” *NSF Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences Seminar Series*, Clarkson University, October 2010. (Invited)
3. “A Guitar Hero Based Project in Mathematical Statistics.” *CAUSEweb.org Activity Webinar Series*, May 2010. (Invited; also available as a podcast via iTunes)

Other Conference Presentations

1. “A Study on Bird Nest Success Rates on Small Family Farm Hayfields.” *Joint Statistical Meetings*, Boston, MA, August 2014.
 2. “Advice for Using Faculty Connections to Create Research Opportunities for Undergraduates.” *International Conference on Teaching Statistics*, Flagstaff, AZ, July 2014. (Co-presented with J. Chapman)
 3. “Predicting Owner Tendencies in Fantasy Football Drafts.” *Joint Statistical Meetings*, Montreal, QC, August 2013.
 4. “An Analysis of Beer Styles.” *Joint Statistical Meetings*, San Diego, CA, July 2012.
 5. “Using Video Games to Introduce Statistical Research in Undergraduate Statistics Courses.” *USCOTS 2011*, Cary, NC, May 2011. (Co-presented with J. Chapman)
 6. “A Guitar Hero Based Project in Mathematical Statistics.” *Joint Statistical Meetings*, Vancouver, BC, August 2010.
 7. “A (Very Brief) Introduction to R.” Quantitative Research Center Workshop, St. Lawrence University, April 2009 and February 2010.
 8. “A k-mean-directions Algorithm for Clustering Data on the Sphere.” *Joint Statistical Meetings*, Washington, DC, August 2009.
 9. “Clustering in the Presence of Scatter.” *Spring Research Conference on Statistics in Science and Technology*, Ames, IA, May 2007.
 10. “Clustering in the Presence of Scatter.” *X CLAPEM: Latin American Congress in Probability and Mathematical Statistics*, Lima, Peru, March 2007.
 11. “Statistical Tests for Vapor Return Monitoring Systems.” *Joint Mathematics Meetings*, San Diego, CA, January 2002. (*Received Student Poster Award*)
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10 Service

10.1 Professional Level Service

Post-tenure

- Writer and Co-Editor, *New York Times* column “[What’s Going On in This Graph](#)” (2025–present)
- External Reviewer, SUNY Potsdam’s Social Data Analytics Major Proposal (2025)
- Reviewer, Carnegie Mellon Sports Analytics Conference Research Paper Competition (2020, 2022)
- Judge, Undergraduate Statistics Project Competition: USPROC (2018)
- Session Chair, Hudson River Undergraduate Mathematics Conference (2018)
- Associate Editor, *Journal of Statistics Education* (2013-2016)
- Manuscript Reviewer (recent journals include *Journal of Statistics and Data Science Education*, *The American Statistician*, *Advances in Data Analysis and Classification*, and *Journal of Quantitative Analysis in Sports*)

Pre-tenure

- Session Chair, Hudson River Undergraduate Mathematics Conference (2013)
- AP Statistics Reader (2009, 2010)
- Manuscript Reviewer

10.2 University Level Service

Post-tenure

- Scholarships, Fellowships, and Grants Committee: Member (2014–2016), Chair (2023–2024, 2024–2025), Co-Chair (present)
- Festival of Science, Scholarship, and Creative Planning Committee: Member (2014–2025), Chair (2019, 2020), Co-Chair (2022–present)
- Faculty Advisor: St. Lawrence University Volleyball Team (2023–present)
- Salary and Benefits Committee: Member (2016–2020, 2021–2023), Voluntary Analyst (2023–present)
- Denmark Study Abroad Selection Committee: Member (2012–2013, 2023)
- Faculty Advisor: St. Lawrence University Volleyball Club (2017, 2022)
- Athletic Advisory Committee: Member (2017–2019, 2022)
- Faculty Mentoring Program: Mentor (2017–2018)

Pre-tenure

- Educational Technology Committee: Member (2012–2013)
- Talented Juniors: Co-taught with Jessica Chapman, Robin Lock, and Michael Schuckers (Fall 2010)

10.3 Departmental Level Service

Post-tenure

- Statistics/Applied Mathematics Tenure Track Search Committee: Member (2025–2026)
- Statistics Teaching Fellowship Search Committee: Co-Chair (2024–2025)
- Data Science Tenure Track Search Committee: Co-Chair (2023–2024)
- Chemistry Tenure Track Search Committee: Diversity Advocate (2021–2022)
- Data Science Major and Minor Proposal Committee: Member (2021)
- Computer Science Visiting Search Committee: Member (2019)
- Data Science Tenure Track Search Committee: Chair (2018), Member (2017)
- Statistics Teaching Post-Doc Search Committee: Chair (2016)

Pre-tenure

- St. Lawrence Q-Club: Co-Advisor (2010–2013, 2014–2015)
- Computer Science Tenure Track Search Committee: Member (2012–2013)

11 Student Mentoring

11.1 Undergraduate Summer Research Projects (26 total, 21 post-tenure)

Post-tenure

Entertainment Analytics

1. Phoebe Jones - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2025.
2. Cooper Olney - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2025.
3. Eric Seltzer - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2024.
4. Vivian Johnson - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2024.
5. Gavin Cassidy - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2024.
6. Abigail Smith - NSF Grant Undergraduate Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2024.
7. Brendan Karadenes - LAS Scholar Summer Research Fellow (Primary Faculty Co-advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2024.
8. Jack Fay - NSF Grant Undergraduate Research Fellow (Faculty Advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2023.
9. Sarah Weaver - St. Lawrence University Fellow (Faculty Advisor): *Developing a Network of Sports Content for Education in Statistics and Data Science*. Summer 2023.
10. Gop Arop - McNair Scholar (Faculty Advisor): *Exploring the Historical Parity in the NBA*. Summer 2023.
11. Grace Bridge - Clare Boothe Luce Fellow (Faculty Advisor): *"You're a [Data] Wizard, Harry" – A Data Science Approach to Analyzing the Harry Potter Series*. Summer 2022.
12. Hope Donoghue - Clare Boothe Luce Fellow (Faculty Advisor): *What Characterizes a Winning Combination? Network Analysis using Sports Data*. Summer 2022.
13. Siyuan Zhang - St. Lawrence University Fellow (Faculty Advisor): *Investigating the Most Effective Card-Upgrade Strategy in Clash Royale*. Summer 2020.
14. Brittanie Gordon - McNair Scholar (Faculty Advisor): *What Drove the Office at Dunder Mifflin? An Analysis of Character Interactions and Their Impact on IMDb Ratings*. Summer 2020.
15. Susan Liu - McNair Scholar (Faculty Advisor): *Using Cluster Analysis to Understand Long Term Viability in Clash Royale*. Summer 2019.
16. Emily Viehl - St. Lawrence University Fellow (Faculty Advisor): *Creating a Recommendation System for Books on Project Gutenberg*. Summer 2018.
17. Shyanne White - McNair Scholar (Faculty Advisor): *Exploring Facebook through R*. Summer 2017.
18. Tenzin Choeyang - Collegiate Science and Technology Entry Program (Faculty Advisor): *Using IMDb's TV Show Ratings as a Teaching Tool*. Summer 2016.
19. James Holly-Grisham - McNair Scholar (Faculty Advisor): *Comparing Genres of Movie Scripts: An Application of Stylometry*. Summer 2016.

Applications to Biological, Environmental, and Physical Sciences

1. Haojing Jia - St. Lawrence University Fellow (Faculty Advisor): *Creating a Statistical Model for Evaluating the Concentration of Smog in China*. Summer 2019.
2. Janelle Fredericks - St. Lawrence University Fellow (Faculty Advisor): *Carbon Density in the Pantropic Forests*. Summer 2015.

Pre-tenure

Entertainment Analytics

1. Juan Chang - McNair Scholar (Faculty Advisor): *Predicting Owner Tendencies in Fantasy Football Drafts*. Summer 2013.

Applications to Biological, Environmental, and Physical Sciences

1. Michael Jahne - PhD Dissertation Committee Member in the Environmental Science and Engineering Department, Clarkson University. *Emission, Transport, and Quantitative Microbial Risk Assessment of Bioaerosols Following the Land Application of Manure*. Completed April 2015.
2. Kathryn Christensen - St. Lawrence University Fellow (Faculty Advisor): *Predicting the Lifetime of Plutonium Fuel Cells*. Summer 2013. In collaboration with Brian Weaver, Los Alamos National Laboratory.
3. Chelsey Legacy - St. Lawrence University Fellow (Faculty Advisor): *An Interactive Program for Modeling Autocorrelation Using Sums of Rational Functions*. Summer 2013. In collaboration with Brian Weaver, Los Alamos National Laboratory.
4. Kerrin Ehrensbeck - St. Lawrence University Fellow (Faculty Advisor): *Improving Plutonium Management at the Los Alamos National Laboratory*. Summer 2012. In collaboration with Brian Weaver, Los Alamos National Laboratory.

11.2 Senior Projects and Independent Studies

Post-tenure

Entertainment Analytics

1. Josh Larson - *SLU Football: Tackling Analytics* (Fall 2025, Graduate Student)
2. Taylor Lum – *Modeling Team Performance in NCAA Division I Women’s Ice Hockey Using Elo Ratings* (2024–2025, Honors, joint with Dr. Robin Lock)
3. Eric Seltzer – *Using Bayesian Statistics to Model Longevity in Powerlifting* (2024–2025, Honors)
4. Brendan Karadenes – *An Analysis of MLB Pitch Selection* (2024–2025, Honors)
5. Vivian Johnson – *Exploring MLB Batting Data Using Multinomial Logistic Regression* (2024–2025, Honors). [GitHub](#)
6. George Charalambous – *Quantifying the Meta: Analyzing Synergy in Esports with Advanced Statistics* (2024–2025, Honors)
7. Liam Kavanaugh – *Building a War Tracking App for Clash of Clans* (Fall 2024)
8. Cassie Richter – *Scraping and Analyzing NCAA Data with Applications to Liberty League Volleyball* (Fall 2022 – Spring 2023, Honors)
9. Katie Wojnowski – *Exploring the Potential of Data Analysis and Machine Learning in the Beer Industry: A Study of IPA Styles* (Spring 2023)
10. Siyuan Zhang – *Using Logistic Lasso Regression and Ego Networks to Model Synergy in Clash Royale* (Fall 2021 – Spring 2022, joint with Dr. Choong-Soo Lee)
11. Gabrielle Collins – *Modeling Synergy in League of Legends Champions* (Spring 2020, non-SYE Independent Study)
12. Abigail Collins – *Modeling Synergy in Clash Royale Cards* (Spring 2020, non-SYE Independent Study)
13. Alex Terry – *Measuring the Impact of Leveling Spell Cards and Their Interactions with Troop Cards in Clash Royale* (Spring 2020, non-SYE Independent Study)
14. Erin-Grace Carey – *Web scraping and Analyzing Dog Breed Information from The American Kennel Club* (Spring 2020)
15. Emily Viehl – *Creating a Content Based Recommendation System Using Sentiment Analysis, Stylometry, and Topic Modeling* (Spring 2019)

16. Sarah Strong – *Systematic Gender Bias in League of Legends* (Spring 2019)
17. Beau Yaremko – *Applying Tree-based Models to Find Successful Team Compositions in Heroes of the Storm* (Spring 2018)
18. Samantha Ormsby – *Applying Sentiment Analysis to the Harry Potter Series* (Spring 2017)
19. Zhengjing Chu – *Implementing a Prisoner’s Island Matchmaking Algorithm for Online Video Games* (Fall 2015 – Spring 2016, joint with Dr. Choong-Soo Lee)

Applications to Biological, Environmental, and Physical Sciences

1. Francesca Mnenula - *Image-Based Estimation of Grass Direction Across Wind-Exposed Environments* (Fall 2025 - Spring 2026, Honors)
2. Ben Sunshine – *Applying the Histogram of Oriented Gradients Algorithm for Detecting Grass Lay Direction* (Spring 2024, Honors). [GitHub](#)
3. Jackie Heitmann – *Applying Generalized Linear Models to Five Peruvian Army-Ant Following Birds* (Spring 2024). [GitHub](#)
4. Grace Bridge – *Using Interactive Graphics to Visualize Evening Grosbeak Movement and Migration Patterns* (Spring 2024, Honors). [GitHub](#)
5. Caroline Krall – *Modeling St. Lawrence County COVID-19 Cases* (Fall 2020 – Spring 2021, Honors)

Statistical Methodology and Other General Statistics Projects

1. Amara McGowan - *Understanding Enrollment Trends for AP Students* (Fall 2025 - Spring 2026, Honors)
2. Kristen Varin – *Introduction to Survival Analysis Modeling Medical Time-to-Event Data Using R Software Packages* (Spring 2024, Honors). [GitHub](#)
3. Edward Smith – *Dissimilarity Measures for Probability Distributions with an Application to Music Artist Classification* (Spring 2023, Honors)
4. Nilza Angmo – *Measuring Happiness in 150 Countries Through Cluster Analysis* (Spring 2019)
5. Nevaan Perera – *Using Sentiment Analysis to Detect Bullying and Toxicity on Social Media* (Spring 2018)
6. Kersey Reed – *The Effect of Principal Components Analysis on the Accuracy of Clustering Algorithms* (Spring 2016)
7. Son Vuong – *Haggling with Google Flights: Predicting Flight Prices* (Fall 2015, joint with Dr. Lee)

Pre-tenure

Entertainment Analytics

1. Juan Chang – *Predicting Owners’ Tendencies in Fantasy Football Drafts* (Fall 2013)
2. Nobu Yamanashi – *Advanced Fantasy Football User Draft Tool* (Fall 2010, Honors)

Applications to Biological, Environmental, and Physical Sciences

1. Kathryn Christensen – *Understanding Uncertainty in Predicting the Lifetime of Plutonium Fuel Cells* (Spring 2014, Honors, joint with Dr. Daniel Look)
2. Kerrin Ehrensbeck – *Using Bayesian Statistics to Model the Plutonium Management Models for the Los Alamos National Laboratory* (Fall 2012, Honors)

Statistical Methodology and Other General Statistics Projects

1. Chelsey Legacy – *An Interactive Program for Modeling Autocorrelation Structures Using Sums of Rational Functions* (Fall 2013 – Spring 2014, Honors)
2. Jeremy Moulton – *The Effectiveness of Home Education* (Spring 2012)
3. Caitlin McArdle – *A New Perspective on Visualizing Likert Data* (Fall 2011, Honors)
4. Jeremy Hadler – *Evaluating the Robustness of Competing Clustering Algorithms* (Spring 2010, Honors)
5. Karma Sonam – *Investigating the Convergence Rate of Sampling Distributions on Skewed Populations* (Spring 2010, Honors)