A. Grant Schissler

Creating statistical concepts, models, and tools for better science and more precise medicine

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GitHub	github.com/SchisslerGroup

EDUCATION

PhD Statistics 2012-2017

University of Arizona, Tucson, AZ

Statistical Informatics track, Minor in Genetics

Statistics Graduate Interdisciplinary Program (GIDP)

Advisors: Walter W. Piegorsch (Statistics) & Yves A. Lussier (Biomedical Informatics)

Thesis:

Contributions to gene set analysis of correlated, paired-sample transcriptome data to enable precision medicine

MS Applied Statistics 2009-2011

Kennesaw State University, Kennesaw, GA

Honors Graduate (4.0 GPA)

BS Applied Mathematics 2002-2005

Georgia Institute of Technology, Atlanta, GA

Dean's List, Social/Personality Psychology Certificate

RESEARCH AREAS

Statistical

Bayesian models/computation/prediction, empirical Bayesian estimation/variance reduction, survival analysis, multilevel/hierarchical models, high-dimensional data analysis/computation/simulation, information theory, single-subject inference/n-of-1 experiments, multivariate statistics, machine learning, causal inference, clustering, big data, data visualization, high-throughput data

Interdisciplinary

Biomedical informatics, bioinformatics, precision medicine, clinical translation, N-of-1, gene expression, gene set analysis, single-cell RNA-seq, cancer, systems biology, case-based reasoning, big clinical data, wildfire modeling, detection of exotic physical signals

APPOINTMENTS

Assistant Professor of Statistics 2017-current

The University of Nevada, Reno, Department of Mathematics & Statistics, University of Nevada, Reno

Data scientist developing innovative models and experimental designs for today's data analytic challenges. Responsibilities include undertaking original research, teaching, mentoring, grant writing, and software engineering.

Affiliated Scientist 2021-current

Renown Institute for Cancer

Applied statistician developing methods and data analyses for the precise treatment of cancer. Responsibilities include teaching, mentoring, undertaking original research, grant writing, and software engineering.

Research Assistant 2014-2017

Lussier Group, Center for Biomedical Informatics & Biostatistics, University of Arizona

Developed statistical informatics methodology for precision medicine. Engaged in interdisciplinary research: working with an expert team of statisticians, physicians, engineers, biologists, geneticists, and computer scientists. Responsibilities include original research, statistical support, grant writing, and software engineering. Here is a link describing our work to Tucson ABC-affiliate KGUN9 (@1:30 minutes).

Biostatistician & Statistical Consultant 2013-2014

HTG Molecular

Biostatistician working to produce market-competitive high-throughput gene expression assays and analytics, began as an intern and was retained as a consultant. Worked in an expert team of biostatisticians and interfaced with business leaders, cancer biologists, geneticists, engineers, and computer scientists. Responsibilities include data analyses/visualization, biotechnology data collection quality control, software engineering, developed recommendations for business leaders, and development of dynamic reporting pipelines for customers.

Instructor/Teaching Assistant 2012-2014

University of Arizona

Developed curriculum and served as an instructor of Preparation for University-Level Mathematics. Also taught Statistical Foundations in the Information Age including R programming.

Mathematics Instructor/Athletic Coach 2006-2012

Tri-Cities High School, East Point, GA

Designed and utilized best-practice pedagogy to teach nearly every secondary mathematics course offered in Georgia. Specialized in AP Statistics. Implemented effective classroom management and motivational systems. Designed and delivered professional development for teachers.

PEER-REVIEWED JOURNAL PUBLICATIONS [Stats]

1. Austin Witt†, Taylor Gurnea†, Franklin Fuchs†, Sahar Sedigh†, and A. Grant Schissler, "Estimating the impact of self-directed parallel curriculum on United States Medical Licensing Exam Step 1 performance.", *American Medical Student Research Journal* , (in press, accepted 15 Aug 2021).

2. Jingyu Liu, Walter W. Piegorsch, A. Grant Schissler, Rachel R. McCaster, and Susan L. Cutter, "Adjusting statistical benchmark risk analysis to account for non-spatial autocorrelation, with application to natural hazard risk assessment", *Journal of Applied Statistics* , (in press , accepted 12 Mar 2021).

3. Alexander D. Knudson†, Tomasz J. Kozubowski, Anna K. Panorska and Alfred G. Schissler, "A flexible multivariate model for high-dimensional correlated count data analysis and simulation", *Journal of Statistical Distributions and Applications* **8**, 6 (2021).

4. Tin Nguyen, Adib Shafi, Nguyen Tuan-Minh, A. Grant Schissler, and Sorin Draghici, "NBIA: a network-based integrative analysis framework - applied to pathway analysis", *Scientific Reports* **10**, 1 (2020).

5. A. Grant Schissler, Dillon Aberasturi, Colleen Kenost and Yves A. Lussier, "A single-subject method to detect pathways enriched with alternatively spliced genes", *Frontiers in Genetics: Current Trends in Translational Bioinformatics* **10**, 414 (2019).

6. Xiang Li†, A. Grant Schissler, Rui Wu, Lee Barford, and Frederick C. Harris, Jr., "A graphical processing unit accelerated NORmal-To-Anything algorithm for high dimensional multivariate simulation", *Advances in Intelligent Systems and Computing: Proceedings of ITNG* **46**, 800 (2019).

7. Samir R. Zaim*, Qike Li*, A. Grant Schissler*, and Yves A. Lussier, "Emergence of pathway-level composite biomarkers from converging gene set signals of heterogeneous transcriptomic responses", *Biocomputing* **2018**, 484-495 (2018).

8. Jingyu Liu, Walter W. Piegorsch, A. Grant Schissler and Susan L. Cutter, "Autologistic modeling in quantitative risk analysis, with applications to urban vulnerability assessment of terrorism outcomes", *Journal of the Royal Statistical Society: Series A* **181**, 3 (2018).

9. A. Grant Schissler, Walter W. Piegorsch and Yves A. Lussier, "Testing for differentially expressed genetic pathways with single-subject N-of-1 data in the presence of inter-gene correlation", *Statistical Methods in Medical Research* **27**, 12 (2018).

10. Francesca Vitali, Qike Li, A. Grant Schissler, Joanne Berghout, Colleen Kenost, Yves A. Lussier, "Developing a 'personalome' for precision medicine: emerging methods that compute clinically interpretable effect sizes from single-subject omics", *Briefings in Bioinformatics* **bbx149**, (2017).

11. V Gardeux*, J Berghout*, I Achour*, AG Schissler*, Q Li, C Kenost, J Li, Y Shang, A Bosco, D Saner, MJ Halonen, DJ Jackson, H Li, FD Martinez, and YA Lussier, "A genome-by-environment interaction classifier for precision medicine: personal transcriptome response to rhinovirus identifies children prone to asthma exacerbations ", *Journal of the American Medical Informatics Association: JAMIA* **ocx069**, (2017).

12. Qike Li*, A. Grant Schissler*, Vincent Gardeux, Ikbel Achour, Colleen Kenost, Joanne Berghout, Haiquan Li, Hao Helen Zhang and Yves A. Lussier, "N-of-1-*pathways* MixEnrich: advancing precision medicine via single-subject analysis in discovering dynamic changes of transcriptomes", *BMC Medical Genomics* **10(Suppl 1)**, 27 (2017).

13. Qike Li*, A. Grant Schissler*, Vincent Gardeux, Joanne Berghout, Ikbel Achour, Colleen Kenost, Haiquan Li, Hao Helen Zhang and Yves A. Lussier, "kMEn: analyzing noisy and bidirectional transcriptional pathway responses in single subjects", *Journal of Biomedical Informatics* **66**, (2017).

14. A. Grant Schissler, Qike Li, James Chen, Colleen Kenost, Ikbel Achour, Dean Billheimer, Haiquan Li, Walter W. Piegorsch, and Yves A. Lussier, "Analysis of aggregated cell-cell statistical distances within pathways unveils therapeutic-resistance mechanisms in circulating tumor cells", *Bioinformatics* **32**, 12 (2016).

15. A. Grant Schissler, Vincent Gardeux, Qike Li, Ikbel Achour, Haiquan Li, Walter W. Piegorsch and Yves A. Lussier, "Dynamic changes of RNA-sequencing expression for precision medicine: N-of-1-*pathways* Mahalanobis distance within pathways of single subjects predicts breast cancer survival", *Bioinformatics* **31**, 12 (2015).

† = student under my supervision, * = joint first authorship

CREATIVE WORKS UNDER REVIEW

1. A. Grant Schissler, Alex Knudson†, Richard DL Foote, Tomasz Kozubowski, and Anna Panorska, "Simulating Dependent High-Dimensional Data via the bigsimr R package, with an Application to RNA-sequencing data", **Journal of Statistical Software**, ().

BOOK CHAPTERS

1. A. Grant Schissler, Hung Nguyen, Tin Nguyen, Juli Petereit, Vincent Gardeux, "Statistical Software", **Wiley StatsRef-Statistics Reference Online**, (2018).

2. A. Grant Schissler and Alex Knudson†, "Software, Statistical", **Wiley Handbook of Computational Statistics and Data Science**, (2020).

† = student under my supervision

GRADUATE STUDENT SUPERVISION

Direct(ed) PhD thesis work:

- Erick Luerken – PhD in Statistics & Data Science "Bayesian Predictive Modeling of High-Resolution NFL Data" *ongoing*

Direct(ed) MS thesis work:

- Alex Knudson – MS in Statistics & Data Science "A Bayesian Multilevel Model for the Psychometric Function using R and Stan" *Dec 2020*

Serve(d) on PhD dissertation committees:

- Lin Li – PhD in Civil and Environmental Engineering "Biomass Density-Function Relationships in Activated Sludge Process" *May 2019*
- Trevor Faske – PhD in Ecology, Evolution, and Conservation Biology "Who framed Rubber Rabbitbrush? genetics, environment, or both" *expected 2022*
- Charles Amponsah – PhD in Statistics & Data Science "A Bivariate Gamma Mixture Discrete Pareto Distribution" *ongoing*
- Francesco Zuniga – PhD in Statistics & Data Science "TBD" *ongoing*
- Ilaria Vinci – PhD in Statistics & Data Science "TBD" *ongoing*

Serve(d) on MS thesis:

- Janyne Little – MS in Natural Resources & Environmental Science "Post-Wildfire Livestock Grazing Management on Public Rangelands in Northeast California" *Summer 2019*
- Conner Dailey – MS in Physics "Probing Exotic Fields with the Global Positioning System" *Summer 2019*
- James Schnebly – MS in Computer Science and Engineering "Distilling Public Data from Multiple Sources for Cybersecurity Applications" *May 2020*
- Samantha Faulstich – MS in Atmospheric Science "Evaluating Fire Emissions Inventories in the Western U.S. With the Development of a Bayesian Model" *Spring 2021*
- Bo Liu – MS in Statistics & Data Science "???" *expected Summer 2021*
- Cheyenne Acevedo – MS in Natural Resources & Environmental Science "Hierarchical Modeling of Spatial Data to Estimate Abundance of Sage-Grouse in Nevada" *expected Summer 2021*
- David Kweku – MS in Statistics & Data Science "Statistical Methods to Characterize Nanomotions of Cells" *expected Dec 2021*
- Morgan Byrne – MS in Natural Resources & Environmental Science "Bayesian Modeling of Mercury Abundance in Ducks" *expected Summer 2023*

Direct(ed) undergraduate honors thesis:

- Kyle Murray – BS in Mathematics, emphasis in Statistics – "Modelling Healthcare Usage in Nevada from 2013 to 2018 by Using Emergency Department Check-ins: A Bayesian Approach" *May 2019*

SOFTWARE & COMPUTING

- **Author/maintainer** https://cran.r-project.org/web/packages/bigsimr/index.html
  BIGSIMR *R Package*
- **Author** http://www.lussiergroup.org
  NOF1 *R Package*
- **Programming/Scripting Languages**
  R, BASH, PBS/LSF HIGH-PERFORMANCE COMPUTING, PYTHON, SQL
- **Statistical Packages**
  SPSS, SAS 9 *(Certified Advanced Programmer)*, MINITAB, R
- **Operating Systems**
  MAC OS, WINDOWS, LINUX
- **Reproducible Research/Publishing**
  LaTeX, R MARKDOWN, EMACS ORG-MODE, MS WORD, ADOBE ILLUSTRATOR, GIT

PROFESSIONAL SERVICE/SYNERGISTIC ACTIVITIES/ASSOCIATIONS

- Serving on the Peer Review Board Frontiers in Genetics of Bioinformatics and Computational Biology (10+ peer reviews/year; Sep 2019 — present)

- Peer review Bioinformatics (Nov 2019)
- ISMCO 2019 Session chair (Oct 2019)
- Peer review for the Challenges in Pattern Recognition in Big Data *Pacific Symposium of Biocomputing 2018* (Sep 2018)
- Peer review for *Communication in Statistics* (Jul 2018)
- UNR Neuroscience Institute affiliated faculty (since Aug 2018)
- University of Arizona Center for Biomedical Informatics & Biostatistics affiliated faculty (since Jul 2017)
- Undergraduate applied math research poster judge at SACNAS 2017 (Oct 2017)
- Peer review for the *BMC Bioinformatics* (Aug 2017)
- Translational Bioinformatics in Precision Medicine (TBC) 2017 Scientific (Peer) Review Board (July 2017)
- University of Arizona Graduate & Professional Student Council Travel Grant Judge (September 2016)
- Contributed to the University of Arizona Health Sciences' participation in the National Precision Medicine Initiative® (Feb 2016)
- Peer review for the *Journal of Biomedical Informatics* (2015)
- Secondary Education Statistics Diversity Outreach: Collaboratively developed and delivered motivational statistics presentation for Saguaro High School statistics classes (29 Apr 2015), Catalina HS (29 Jan 2016), Sunnyside HS (12 Feb 2016), Bisbee HS (5 Apr 2016), San Miguel HS (23 Mar 2017)
- Member: American Statistical Association (ASA), Royal Statistical Society (RSS), International Society for Computational Biology (ISCB)
- Educator: Clear and Renewable Georgia Educator Certificate Mathematics (6-12)

PRESENTATIONS AT PROFESSIONAL MEETINGS, CONFERENCES, EVENTS

1. MW-CTR-IN Interim Meeting 2021†, virtual, 16 Feb 2021 (Accessible precision medicine via modeling of N-of-1 genomics and demographics)
2. CMSTATS 2020†, virtual, Dec 2020 (Simulating Ultra High-Dimensional Multivariate Data using the bigsimr R package)
3. CMAS 2020‡, virtual, Oct 2020 (Evaluating Fire Emissions Inventories in the Western U.S. With the Development of a Bayesian Model)
4. ESCO 2020†, virtual, Jun 2020 (Simulating Ultra High-Dimensional Multivariate Data using the bigsimr R package)
5. City of Hope Cancer Center†, Los Angeles, CA, Jan 2020 (Bespoke computational oncology: How to conduct statistical inference when convention methods fail)
6. CMSTATS 2019†, London, GB, Dec 2019 (On Simulating Ultra High-Dimensional Multivariate Data)
7. ISMCO 2019, South Lake Tahoe, NV, Oct 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)
8. ICOSDA 2019†, Grand Rapids, MI, Oct 2019 (On Simulating Ultra High-Dimensional Multivariate Discrete Data)
9. RSS 2019, Belfast, NI, Sep 2019 (On Simulating Ultra High-Dimensional Multivariate Discrete Data)
10. JSM 2019, Denver, CO, Jul 2019 (On Simulating Ultra High-Dimensional Multivariate Data)
11. ITNG 2019*, Las Vegas, NV, Apr 2019 (A graphical processing unit accelerated NORmal-To-Anything algorithm for high dimensional multivariate simulation)

12. JSM 2018, Vancouver, Canada, August 2018 (Clustered-T: Correlated paired-sample gene set test)
13. ESCO 2018†, Pilsen, NV, Jun 2018 (A graphical processing unit accelerated NORmal-To-Anything algorithm for high dimensional multivariate simulation)
14. Health Campus Conference, Reno, NV, Nov 2017 (GxE classifier for precision medicine)
15. Health Campus Conference, Reno, NV, Nov 2017 (GxE classifier for precision medicine)
16. TBC-2017*, Los Angeles CA, Sep 2017 (Computational analyses of single-subject 'omics' to develop a 'personalome': How far are we from clinically-interpretable results?)
17. JSM-2016, Chicago IL, August 2016 (Testing for differentially expressed pathways from within-subject matched pairs of RNA-seq data sets)
18. ISMB-2016, Orlando FL, July 2016 (Statistical distances in circulating tumor cells)
19. First workshop on Interdisciplinary Statistics, CIMAT Guanajuato Mexico, June 2016 (Statistical informatics for precision medicine)
20. ISMB/ECCB-2015, Dublin, July 2015 (N-of-1-*pathways* MD)
21. 2016 Mathematics Educator Appreciation Day, Tucson, 23 Jan 2016 (Incorporating quantitatively-talented and underrepresented high school students in Arizona into the biostatistics community)

* = Joint work, but another author presented.
† = Invited talk. ‡ = Student author presented.

SEMINARS AND COLLOQUIA

1. Guest Lecture for MATH/STAT 794 Graduate Seminar, Reno, NV, 31 Mar 2021 (Simulation studies using Okapi the Server)
2. Research talk for MATH/STAT 794 Graduate Seminar, Reno, NV, 10 Feb 2021 (Simulating Ultra High-Dimensional Multivariate Data using the bigsimr R package)
3. Guest Lecture for MATH/STAT 794 Graduate Seminar, Reno, NV, Nov 2020 (Computational resources & tools)
4. Guest Lecture for STAT 758 Time Series, Reno, NV, Nov 2020 (Bayesian modeling of 1000 years of cherry blossoms)
5. Guest Lecture for STAT 757 Applied Regression, Reno, NV, Nov 2019 (Simulation for checking statistical procedures and model fits)
6. UNR Okapi High-Performance Computing Workshop, Reno, NV, Nov 2019 (Massive R simulations using Emacs, Miniconda, and slurm)
7. UNR Biochemistry Seminar†, Reno, NV, Nov 2019 (Bespoke bioinformatic modeling: How to conduct statistical inference when conventional approaches fail)
8. UNR Statistics & Data Science Graduate Seminar†, Reno, NV, Apr 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)
9. Bioinformatics Mixer†, Reno, NV, Apr 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)
10. Wrocław University of Science and Technology†, Wrocław, Poland, Mar 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)

11. University of Wrocław†, Wrocław, Poland, Mar 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)
12. Bioinformatics Mixer†, Reno, NV, Apr 2019 (A single-subject method to detect pathways enriched with alternatively spliced genes)
13. UNR Neurolecture Journal club†, Reno, NV, Nov 2018 (Reasoning with Uncertainty the Bayesian way with examples in Cognitive Modeling in R and Stan)
14. UNR Neurolecture Series, Reno, NV, Feb 2018 (Reasoning with Uncertainty the Bayesian way with examples in Cognitive Modeling in R and Stan)
15. Bioinformatics Mixer†, Reno, NV, Feb 2018 (Gene set analysis of correlated, paired-sample transcriptome data to enable precision medicine)
16. University of Arizona, Quantitative Biology Colloquium, *Gene set analysis of correlated, paired-sample transcriptomes to enable precision medicine*, 4 Apr 2017
17. University of Arizona, GPSC Grad Slam, *Information Age statistical analysis of gene expression data to enable precision medicine*, 24 Mar 2017
18. University of Arizona, Stats GIDP blitz talks, *Interdisciplinary statistics training*, 6 Mar 2017
19. University of Nevada, Reno, Colloquium, *Contributions to gene set analysis of correlated, paired-sample transcriptomes to enable precision medicine*, 17 Feb 2017
20. University of Arizona Biostatistics Seminar, *Statistical Development of N-of-1-pathways MD*, 17 Feb 2016
21. University of Arizona Statistics Student Meeting, *Reproducible Research through GNU Emacs Org-mode*, 18 Feb 2014

† = Invited talk

POSTER SESSIONS AND SHOWCASES

1. JSM 2019 - Denver, CO, USA, *ePoster: Simulating Ultra High-Dimensional Multivariate Data*, July 2019
2. RSS 2018 - Cardiff, Wales, *Testing for differentially expressed genetic pathways with single-subject N-of-1 data in the presence of inter-gene correlation*, Sep 2018
3. JSM 2016 - Chicago, IL, *Increasing awareness of careers and an education in statistics among quantitatively-talented underrepresented high school students*, Aug 2016
4. University of Arizona Student Showcase, *N-of-1-pathways for precision medicine*, 24 Feb 2016
5. GIDP Student Research Showcase, *N-of-1-pathways for precision medicine*, 10 Dec 2015

SPONSORED PROJECTS & FUNDING

- Oct 2019 - Jun 2020 MW CTR-IN Pilot Grant 2019-2020: Accessible precision medicine via modeling of N-of-1 genomics and demographics. Principal Investigator. $60k budget.
- 2016 GPSC Travel Grant, Merit-based travel grant for JSM 2016 in Chicago, IL
- 2016 ISMB Travel Fellowship, Merit-based travel fellowship for ISMB 2016 in Orlando, FL
- Summer 2016 HE Carter Travel Award, Graduate Interdisciplinary Programs, University of Arizona
- Summer 2015 HE Carter Travel Award, Graduate Interdisciplinary Programs, University of Arizona
- 2015 ASA Biometrics Section Funding of Proposed Strategic Initiative: Incorporating quantitatively-talented and underrepresented high school students in Arizona into the biostatistics community. - Grant Co-Investigator

AWARDS

- 2019 Semi-finalist best paper in Trend 3: Pathway-level versus gene-level analyses for Zaim SR, Li Q, Schissler AG, Lussier YA. Emergence of pathway-level composite biomarkers from converging gene set signals of heterogeneous transcriptomic responses. Pac Symp Biocomput 2018; 23: 484-95., Contributions from the 2018 Literature on Bioinformatics and Translational Informatics: Section Editors fo the 2019 IMIA Yearbook Section on Bioinformatics and Translational Informatics.
- June 2019 ITNG 2019 Best Student Paper Award, ITNG program committee, Xiang Li.
- 2019 Westfall Mentor, The University of Nevada, Reno, Kyle Murray.

Student Awards

- 2019 Spring 2019 Herz Gold Medalist, The University of Nevada, Reno, Kyle Murray.
- 2019 Department of Mathematics & Statistics Westfall Scholar, The University of Nevada, Reno, Kyle Murray.

LICENSEES AND CERTIFICATIONS

- 2019, Certificate in Effective Instruction, Association of College and University Educators

TEACHING

@ The University of Nevada, Reno:

Fall 2020: **STAT 152: Introduction to Statistics**
Led a large course offering of Introduction to Statistics for non-STEM majors. Used active learning strategies such as Zoom breakout rooms and software-based statistical calculation in Pearson StatCrunch. Content was classically motivated using normal theory for estimation and testing, but focus was on the intuition rather than hand computation.

- *"Professor Schissler was very good at teaching this subject. I really enjoyed attending lectures because he was always wanting to communicate with the lower percentage of students that attended lectures, and wanted us to know that we should feel comfortable asking any questions that we had. He was always ready and able to help his students with any struggles they were having. He is also very good at teaching this topic because he would give examples in class, as well as relate to real world settings."*
- *"Professor Schissler is probably the most genuine, kindhearted professor I have ever had. He always checked in with how we were all doing given the state of things and was so sincere about his concern for our wellbeing and how that translated into our success in his course. He did a great job of not beating around the bush with the content but rather just teaching us what we needed to complete homework, quizzes, and exams. SO GREAT."*

Spring 2019: **STAT 446/646: Introduction to Bayesian Statistics**
Led an undergraduate/graduate hybrid course in an introduction to Bayesian statistics. Proposed and developed the course using activity learning activities. Statistical inference using Bayes' Theorem. Topics include Bayesian/frequentist comparison, posterior analysis for continuous and discrete random variables, prior specification, Bayesian regression, multivariate inference, and posterior sampling through Markov Chain Monte Carlo.

- *"Dr. Schissler is a very good instructor, one of the best in the Stats department! He's always very kind and understanding of students' predicaments. I took a course with him last semester and I have to say that he has improved a ton this semester. I really enjoyed the hands on activities in his lectures and I thought the lectures themselves were interesting as well. He did a great job explaining Bayesian concepts and his lectures complimented the textbook pretty well. The only thing I would have liked to see more of is him explaining how to code up all these concepts in R because the textbook didn't really have any code examples but they were frequently in the homework, which made for a difficult time. Regardless, I would definitely recommend his classes to others and/or take another class with him myself."*

– *"Dr. Schissler is by far the best teacher I've had in any form of academia. He is very methodical as he maps out a day plan for each class and follows it well. He never tries to hide information from any student and is constantly encouraging his students to engage in the material and actively learn. He is very generous and always gives the benefit of the doubt to his students when errors are made on tests or homework. He is very approachable and friendly to his students. He doesn't just lecture, he teaches. It has been a tremendous class thanks to Dr. Schissler, and I hope to have more classes taught by him in the future."*

Fall 2018: **STAT 445-645: Introduction to Statistical Computing**
Led an undergraduate/graduate hybrid course in statistical computing. Developed course using both online and in-class activities. Topics include basic R programming, data analysis workflow, optimization, parallel computing, maximum likelihood estimation, Markov Chain Monte Carlo (MCMC), Monte Carlo studies, bootstrap, and advanced data visualization.

– *"As a stat major I feel like this was one of the most useful classes I have taken in my major. Compared to CS classes, this class was much more applicable and practical for stat major. I was able to use things I learned in this class in other classes and I am sure I will use the skills I learned in my future. This class should be required for stat majors and should replace Math 466."*
– *"Dr. Schissler is as much a life coach as he is statistician and instructor. On top of excellently conveying the information of the weekly lessons, he also routinely showed the class tools to be better prepared and organized in many other aspects of life. I look forward to his class next semester."*

Summer 2018: **MATH 352: Probability & Statistics**
Taught an accelerated-schedule traditional introduction to prob/stat for 47 upper-level STEM-major students. Some student testimonials are included below:

– *"He was an amazing professor. He really cared about his students and wanted their feedback to improve the course and his teaching. He was extremely fair with grading and was very clear with what he expected us to be able to do. He was always there to help any student that needed it. I loved how he showed us stats on MiniTab and R. . . "*
– *"Dr. Schissler has a passion for teaching and a true desire for his students success. Cumulative testing throughout the course is beneficial and provides for better retention and overall understanding of the material."*

Spring 2018: **STAT 757: Applied Regression Analysis**
Guided a class of 26 graduate students in applied regression analysis in R and R Markdown. Topics included simple and multiple linear regression, diagnostics/remediation, model selection, time series, logistic regression, and mixed effects modeling. Supervised 15 research projects during the course. Some student testimonials are included below:

– *"This was one of the best courses I had outside my discipline. I liked the instructor's teaching style, knowledge, and candidness. He made a great impression on me and helped me improve several aspects of my learning style. He has great passion for what he does and it shows."*
– *"Grant is very enthusiastic and helpful. The class was challenging, but I liked his approach to teaching it. Constantly pushing, and focused on the learning rather than the grade. He was readily available to answer questions and you can tell he really enjoys his job/work. If he doesn't, he fakes it really well."*

Fall 2017: **MATH 330: Linear Algebra**
Guided a class of 70+ upper-class undergraduate students to obtain/exceed linear algebra learning objectives. Developed a 'blended' approach to instruction, featuring flipped classroom elements along with collaborative in-class work sessions. Some student testimonials are included below:

– *"Doctor Schissler cares very much about student success. He is empathetic, understanding, and passionate about the subject material! The flipped classroom approach takes some getting used to, but it does make the "ah-ha" moments when something clicks all the more satisfying."*
– *"One of the best professors I've ever had. He has a better teaching method than most, but understands that it needs some adjustment. He completely overhauled his teaching method to ensure that the class*

learned his material. Truly showed love for teaching and interest in making sure we walked away with the knowledge we needed[.]"

@ U. of Arizona:

- Fall 2012/2013: **SAS100AX: Preparation for University Level Mathematics**
  Instructor: Guided first year students to became independent learners through explicit instruction of metacognition, mathematics learning strategies, performance traits, and rapid skill acquisition. Designed "flipped" classroom curriculum to maximize student learning and engagement. Formerly behind students were retained at much higher rates than on-level students.
- Fall 2012: **ISTA116: Statistical Foundations in the Information Age**
  Teaching Assistant: Led a weekly statistics laboratory. We focused on a broad range of applications with computing solutions via R.

@ Tri-Cities High School, Math Dept.:

- 2008-2012: **AP Statistics**
  Instructor: Received best-practice training from Paul Myers and Josh Tabor among others. Designed and implemented "flipped" classroom curriculum. Grew the statistics program by gaining stakeholder interest, resulting in more than a 50% increase in student enrollment. Increased AP exam success and student awareness of statistical careers. Spearheaded data-driven decision making for student/school initiatives.

- 2006-2012: **Other Secondary Math Courses**
  GPS Advanced Algebra, Discrete Math, Trigonometry, Geometry, Algebra I-III:
  Taught every secondary course available except AP Calculus. Specialized in teaching 11^{th} grade students to prepare them for the Georgia High School Graduation Test (GHSGT). The GHSGT is a major determinant of student and school-wide achievement. Designed and led after-school tutorial programs for GHSGT.