Andrew B. Maurer

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Education

- **Mathematics, Ph.D.** — Athens, GA
  University of Georgia — 2019
- **Mathematics, B.S.**, Computer Science, Minor. — Amherst, MA
  University of Massachusetts — 2014

Additional Education

- **Insight Data Science** — Seattle, WA
  Post-Ph.D. fellowship focused on producing projects and preparing for a career in data science. — 2019
  Conceived of, designed, and built web-app *Permitted* (see *Data Science Projects* below).

Skills

- **Programming:** *Deep Learning Frameworks:* PyTorch, Fast.AI, TensorFlow. *Statistical Programming:* R, SciPy stack. *General Programming:* Python, Java. *Mathematical Programming:* Sage, GP/Pari.
- **Software:** *Operating Systems:* GNU/Linux, Windows, Mac OS. *Scripting:* Bash, Python. *Version control:* Git. *Document preparation:* LaTeX, org-mode, HTML, markdown.
- **Mathematics:** Linear algebra, calculus, real analysis, algorithms, formal language theory, data structures, statistical regression, nonparametric data analysis, machine learning, deep learning, abstract algebra, complex analysis, algebraic number theory, representation theory, Lie superalgebras, homological algebra.
- **General:** Public speaking, mathematics education, college teaching, workshop facilitation.

Data Science Projects

- **Permitted** (*Insight Data Science Project*): A web app which predicts safe times to drive, allowing teens to practice driving in progressively more difficult conditions.
  - Utilized data from over 200,000 traffic collisions in Seattle between 2014 and 2019.
  - Generated on-the-fly visualizations using GIS.
  - Modeled using one-class support vector machines and k-nearest neighbor classifiers.
  - Deployed web-app using Flask and Amazon Web Services.

Experience

- **Research:** Single-author publication in respected journal. Extensive research in algebra and representation theory. REU on asymptotic problems in coding theory, graph theory, and number theory. Numerous invited talks.
- **Organizer:**
  – Co-organizer of Southeast Lie Theory Workshop (2018, ∼35 talks, ∼150 domestic and international participants).
  – Co-organizer of Graduate Student Summer Program & Conference (2018, 6 workshops, ∼40 talks),
  – Co-founder / co-organizer of weekly *S.M.A.R.T.S.* seminar (2017–18, ∼25 participants),
  – President of UGA's *Chapter of the American Mathematical Society* (2015–17, ∼50 members),
- **Teaching:** *Instructor of record:* Calculus, Pre-Calculus, Mathematics of Decision Making, Upward Bound SAT Math. *Teaching Assistant:* Linear Algebra, Introduction to Proofs, Differential Calculus, Integral Calculus, Foundations of Geometry, Abstract Algebra.
- **Selected Presentations:**
  – *Finite Generation of Relative Cohomology for Lie Superalgebras* (Texas A&M Algebra Seminar, audience: research specialists),
  – *Statistics For Mathematicians* (S.M.A.R.T.S. Seminar, audience: math graduate students),
  – *Coloring Graphs on Surfaces* (Week-long Math Camp, audience: high school students).