Jake Weber

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WORK HISTORY

- **Louisiana State University**, Baton Rouge, LA, Graduate Assistant, (08/2020 to Present)
  Instructor: Math 1020/1021 and 4019. Grader: Math 1550, 1552, and 2090.
- **Louisiana State University**, Baton Rouge, LA, Graduate Assistant (SEED Grant), (06/2021 to 08/2023)
  Analyzed program needs in order to lead in developing marketing and recruitment initiatives, networking with key campus stakeholders, advising of students and program directors, and maintaining all programmatic communications.
- **University of Northern Iowa (UNI)**, Cedar Falls, IA, Graduate Assistant, (08/2018 to 05/2020)
  Grader for 5 courses. Managed and worked in the UNI Math Lab, assessing student needs through effective probing and tutoring all courses offered at UNI through inquiry-based instruction.
- **UNI Classic Upward Bound**, Cedar Falls, IA, Precalc Instructor, (06/2019 to 07/2019)
- **UNI Academic Learning Center**, Cedar Falls, IA, Tutor, (01/2018 to 05/2018)
- **PDCM Insurance**, Cedar Falls, IA , Personal/Commercial Lines Licensed, (06/2015 to 01/2018)

PROJECTS

- **Math Dissertation (In Progress):** Refining a known certificate for the class of line graphs. Analyzing boundary graphs through algorithmic application of specialized graph operations in Python using SageMath.
- **Alumni Profiles:** Designed marketing strategy, execution, and delivery plans. Established key relationships with campus stakeholders to bring alumni profiles to market, integrated with the new Modern Campus web implementation. - GeauxTeach STEM: Geauxing Places
- **M.A. Thesis:** Guided by Dr. Adrienne Stanley, independently confirmed established introductory results on two-color classical Ramsey and Cycle-Complete Ramsey numbers. Determined Cycle-Complete Ramsey number for the special case of $f(C_k, K_3)$ for $k \geq 3$.

EDUCATION

- **Ph.D. in Mathematics** (May 2025), Louisiana State University, Baton Rouge, LA (GPA: 3.85/4)
- **M.S. in Computer Science** (May 2025), Louisiana State University, Baton Rouge, LA (GPA: 3.85/4)
- **M.A. in Mathematics** (May 2020), University of Northern Iowa, Cedar Falls, IA (GPA: 4/4)
- **B.A. in Mathematics** (May 2018), University of Northern Iowa, Cedar Falls, IA (GPA: 3.96/4)

SKILLS AND ACCOMPLISHMENTS

- **Programming/Application Experience** - Python (Jupyter Notebook, SageMath, Keras), LaTex, Mathematica, MatLab, Prolog, Lean, SMLNJ - Adobe InDesign, OMNI CMS, Photoshop Elements
- **Accomplishments**
  - SLMath (MSRI) Graduate Summer School: Formalization in Mathematics participant, coding in Lean (2023), LSU/BR Safety Forum Organizer and Chair (2022)
  - UNI Graduate Assistant First Award recipient (2020), Graduated with The Purple and Old Gold Meritorious Award and Magna Cum Laude (May 2018)
  - Working to solve the aircraft routing problem, presented *The Genetic Algorithm: Relevance Beyond Biology* at the annual Society of Industrialized and Applied Mathematics (SIAM) conference (2016)
- **Involvement** - Sigma Phi Epsilon: Alumni Board Member (LSU), Troopers Drum and Bugle Corps, Keeping Tigers Safe (LSU), GEAUX Orientation (LSU Math), Iowa Irish Fest Committee: Logistics Team Member, Sigma Phi Epsilon: VP of Finance/Member, Kappa Mu Epsilon: President/Member, UNI Bowling Club President/Member, Student Fees Committee: At Large Seat (UNI)