Benjamin Mikek

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`https://mikekben.github.io/`

First year Ph. D. student at Georgia Tech in the field of program analysis and verification.

Education

- **Georgia Institute of Technology** — Atlanta, GA, USA
  Ph.D. in Computer Science — *In progress since Fall 2021*
  - Advisor: Dr. Qirun Zhang
- **Grinnell College** — Grinnell, IA, USA
  Bachelor of Arts in Computer Science & Mathematics, with honors — *May 2021*
  - GPA: 3.83/4.00 (4.00/4.00 in Computer Science courses)
  - Selected courses: Human–Computer Interaction, Automata & Complexity, Number Theory
- **Budapest Semesters in Mathematics** — Budapest, Hungary
  Off-campus study program at the Rényi Institute of Mathematics — *Fall 2019*
  - Courses: Topology, Set Theory, Theory of Algorithms, Introduction to Hungarian

Research

1. COURAGE Remote REU in Mathematics at Clemson University — Summer 2020
   - Studied computational geometry with a team of three students and a faculty mentor
   - Developed efficient algorithms to dynamically compute data depth according to two different methods
   - Presented "Dynamically Computing Simplicial Depth in Data Sets" at the 2020 COURAGE conference
2. NSF REU in Mathematics at Lamar University — Summer 2019
   - Conducted research into the intersection of matrix decomposition and graph theory
   - Worked closely with a faculty mentor and an undergraduate partner to develop a research project
   - Presented "Decompositions of the Incidence Matrices of Undirected Graphs" at the Joint Mathematics Meeting 2020 poster session

Teaching

1. Computer Science Mentor (Grinnell College)
   - Introduction to CS (Functional Problem Solving) — Sp. 2020, Su. 2020, Spring 2021 T. I
   - Individual Mentor for Computational Linguistics — Fall 2020 Term II
2. Mathematics Mentor (Grinnell College)
   - Discrete Bridges to Advanced Mathematics (Number Theory) — Spring 2020

3. Computer Science Grader (Grinnell College)
    - Introduction to Computer Science (Functional Problem Solving) — Fall 2020 Term I
    - Object-Oriented Problem Solving, Data Structures, and Algorithms — Fall 2020 Term II
4. Mathematics Grader (Grinnell College)
    - Calculus II — Fall 2018, Spring 2019
    - Linear Algebra — Fall 2020 Term I & Term II
    - Differential Equations — Spring 2021 Term I
5. Physics Lab Mentor (Grinnell College)
    - General Physics II (Electricity & Magnetism) — Spring 2019

Community Service

1. Grinnell Code Club Volunteer — Spring 2019–Spring 2021
    - Prepared computer science lesson plans for fourth grade students using the Scratch language
    - Answered student questions and inspired learning about technology
2. FIRST Tech Challenge Robotics Volunteer — Spring 2018–Present
    - Volunteered to help host robotics competitions for high school students
    - Advised teams on programming and electrical systems

Specialized Skills

1. Technical tools: LLVM, SVF, angr, LaTeX, Wolfram Mathematica, MATLAB
2. Languages (fluent): English, Slovene, Spanish