

Ben Frankel

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🔧 Work Experience

MathWorks

Software Engineering Intern (EDG)

- Vectorized functions for x86 with SSE & AVX intrinsics
- Wrote generic C++ code (template specialization, metaprogramming, SFINAE, CRTP)
- Worked directly with IEEE floating-point formats

Summer 2018
Natick, Massachusetts

🎓 Education

Iowa State University

B.S. Computer Science & Mathematics with Honors

3.88 Cumulative GPA

August 2015 – May 2019
Ames, Iowa

🌱 Projects

hgf

- Hierarchical GUI framework designed to manage complexity by combining simple components
- Designed convenient API using metaprogramming
- Improved UI performance with dirty rectangle rendering
- Applied topological sort algorithm to dependency resolution
- Implemented text box word-wrapping algorithm

Grid Coloring

- Mathematical grid coloring application
- Implemented flood fill algorithm
- Utilized data serialization library to save and load grids from a file

Backronym Engine

- Generates interpretations of unknown acronyms

Set Game

- Pattern-matching card game

🏆 Awards

Regional ACM ICPC

- 6th place

November 2017
North Central North America

William Lowell Putnam Exam

- 105–112th place

December 2015
North America

📖 Skills

Programming Languages

- **Proficient:** Python, C++
- **Experienced:** C, Rust, Bash, Java, x86 Assembly
- **Familiar:** SQL, Emacs Lisp, Haskell, Go

Technologies

- GNU / Linux, Git, Emacs, HTML & CSS