

GABE COHEN

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EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Science in the College of Engineering

Graduating May 2022

GPA: 3.9

PROJECTS

wonplot *In Progress*

- Coded Dijkstra's Shunting Yard algorithm for parsing mathematical expressions into ASTs
- Constructed efficient renderer of 3D equations in the browser with WebGL

Software Defined Radio Spectrum Analyzer *In Progress*

- Wrote custom implementation of the fast fourier transform taking advantage of C++ template metaprogramming
- Added preliminary support for windowing functions

GUTS!

- Implemented value iteration to find optimal strategy to the two player dice game GUTS!
- Resulting AI beat all competing AIs submitted by classmates, teacher, and past students

Shakespeare Role Assigner

- Parsed JSON representations of Shakespeare plays into adjacency matrices
- Devised various graph coloring approximation algorithms in order to generate minimally conflicting and maximally equal role assignments (i.e. assign characters to students such that they are not playing two characters in one scene)

wp-polls Audit

- Audited a popular Wordpress plugin for easy poll creation
- Discovered and patched a vulnerability allowing malicious actors to submit unlimited votes

Joplin Contributions (6,000 Github ★)

- Added support for terminal autocompletion in the popular open source note taking app

TECHNICAL STRENGTHS

Proficient	C++, Javascript, Typescript, Java, Python, React, Linux
Intermediate	flask, express, Webpack, C, Haskell, OpenGL, WebGL, THREE.js
Beginner	React Native, SQL, QGis, Postgis, Blender

WORK EXPERIENCE

Cashier at Jewel Osco

May 2018 - August 2018

- Contributed to a positive customer experience through efficient and courteous operation of a point of sale terminal
- Resolved pricing conflicts by directing interdepartmental communications

AWARDS AND ACCOMPLISHMENTS

- UIUC Rothmuller CS Scholarship
- NSA Codebreaker Challenge Finisher
- National Merit Scholar
- UIUC WYSE Academic Challenge Computer Science Champion
- Sommer Foundation Scholarship