

## TONGXU (TONY) BAI

3159 Birchwood Dr, Ann Arbor, MI 48105

bait@umich.edu • (734) 478-9553

Website: <http://tonyb.ai>

### OBJECTIVE

Dedicated undergraduate engineering student in computer science with a robust background in mathematics seeking a 2020 internship.

### EXPERIENCE

#### Software Development Engineer Intern

*Amazon.com, Inc., Seattle, WA*

*May 2019 - July 2019*

- Worked on the Community Shopping team in the Consumer Organization for 12 weeks.
- Developed a service which surfaces recommendation widgets on product detail pages with our custom strategy and renders them.
- Widget linked users to content found on Amazon #FoundItOnAmazon/Amazon Spark which has 1,000,000+ weekly active users.
- Gained experience with code reviews, version control, and Amazon's DevOps tools, as well as specific technologies listed below.

### EDUCATION

#### University of Michigan, Ann Arbor, MI

*GPA: 3.81*

*Bachelor of Science in Engineering in Computer Science and Data Science*

*September 2018 - May 2021*

*Minor in Honors Mathematics*

### COURSEWORK

<i>EECS</i>	A+ in Data Structures and Algorithms (281), A in Computer Organization (370), A in Foundations of Computer Science (376)
<i>MATH</i>	Honors Analysis I (395), Combinatorics (465), Probability (525)
<i>This Year</i>	Fall: Advanced and Object-Oriented Programming (EECS 381), Honors Algebra I (MATH 493) Winter: Operating Systems (EECS 482), Web Systems (EECS 485)

### SKILLS

*Worked with in Professional Capacity:* C/C++ (adv), Java, Handlebars, Git, Bash, Google Guice, AWS ElasticSearch, AWS EC2

*Mathematics:* Proof-writing, competition math, linear algebra, graduate-level probability & combinatorics

*Extracurricular:* Piano performance, bassoon, direct sales, medical research

*Languages:* English (native), Chinese (native in speaking and listening), German (basic)

### PUBLICATIONS & PROJECTS

#### Generator for Simple Zeckendorf Sequences.

<https://github.com/tonyb7/zeckendorf-sequences>

Developed an algorithm to generate simple Zeckendorf sequences and implemented it in C++ to help my friend write her math paper.

#### Chess Bot. Challenge it if you dare!

[https://lichess.org/@/FlamingDragon\\_9000](https://lichess.org/@/FlamingDragon_9000)

Implemented the Stockfish 9 chess bot on the Lichess website and deployed it to a Heroku server to run by itself 24/7.

#### Puppet Show Soundboard

[https://github.com/tonyb7/fsbmp\\_sounds](https://github.com/tonyb7/fsbmp_sounds)

Created a soundboard to streamline the audio-playing system for the puppet show of my church's Freshman Spring Break Missions Project, which we planned to present to the kids at Englewood Family Outreach in the Englewood neighborhood of Chicago.

### HONORS & AWARDS

- Two-time National AP Scholar
- National Merit Finalist
- U.S. Presidential Scholar Nominee
- Michigan Mathematics Prize Competition Top 20
- Two-time AIME qualifier