

Michael Gathara

Email: michael@michaelgathara.com

Website: <https://michaelgathara.com/links>

EDUCATION

The University of Alabama at Birmingham

BSc and MSc in Computer Science

Extracurriculars:

- **Math Club at UAB:** Executive Advisor
- **Association for Computing Machinery at UAB:** President
- **Magic City Data Collective Advisory Board:** Member
- **Student Health Advisory Board:** Member

Masters:

Expected May 2025

Thesis Track

Bachelors:

Dec 2023

PROFESSIONAL EXPERIENCE

Apple,

Incoming Software Engineer Intern

Cupertino, CA

May '24 - Aug '24

The University of Alabama at Birmingham Computer Science,

Teaching Assistant & Research Intern

Birmingham, AL

Sept '22 - Present

- Theory of Computation TA - Fall '22 • Algorithms and Data Structures - Spring '23
- Advanced Web Development - Summer '23 • Systems Programming - Fall '23
- Impacted over **1000 students**
- Research Assistant for **HPC** and **Programming Languages Research**, compilers, interpreters

DarkTower

Intelligence Analyst II & Software Engineer

Birmingham, AL

June '21- Sept '22

- Developed **five internal tools** that increased analysts' efficiency
- Manage and Develop all DarkTower Software Development Projects.

Economic Development Partnership of Alabama

Machine Learning Engineer Intern

Birmingham, AL

June '21- Aug '21

- **Led a team of 4 interns** to complete a data science project that benefited a community of **over 10,000 residents**.
- Partnered with key stakeholders to translate business requirements into solutions.

PROJECTS

Trainable Neural Network from Scratch (CPU and GPU versions)

Wrote a trainable Neural Network from scratch in C++ and CUDA to run on the GPU

<https://michaelgathara.com/git/neural-network-in-c>

Skills: C++, Neural Networks, Pytorch, Tensorflow, Matrix Programming, CUDA

Brouhaha's Compiler and Interpreter,

Worked on the compiler, interpreter, and automated testing software for a new language within HARP's research group.

<https://github.com/harp-lab/brouhaha>

Skills: Racket, Compiler Writing, Interpreter Writing, Git/Github, Research, Writing

Ai or Humans,

Wrote a web app that lets users test their ability to distinguish between AI and Human created images, **impacting over 100 users** and increasing awareness of AI images

<https://aiorhumans.com> OR <https://michaelgathara.com/git/aiornot>

Skills: NodeJS, ReactJS, Firebase Hosting, Firebase Functions

SKILLS

Languages: Python, C, C++, Rust, Racket, OCaml, Javascript, HTML, CSS, Java, SQL

Frameworks: ReactJS, GraphQL, PyTorch, Keras, Flask, Django, Bootstrap, ExpressJS, NLTK

Technologies: Google Cloud, Azure, AWS, Hugging Face, Firebase, Git, Docker, Kubernetes, RESTful APIs