# Gavin Ratcliff

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## EDUCATION

**Texas A&M University** College Station, TX
*Bachelor of Computer Science & Applied Mathematics* May 2027
GPA: 4.0/4.0
Honors**:** 4.0

## EXPERIENCE

**LLVM Contributor** Austin, TX
*Compiler developer* June 2021 - February 2023
Contributed code to LLVM, one of the largest industry led open source compiler projects.
- Identified, diagnosed, and fixed a bug in the 'Clang' compiler's parser that caused invalid C code to be parsed and compiled as if it were correct.
- Worked with industry employed developers to have my code changes reviewed and merged into the mainline LLVM codebase.
- Taught myself extensively about compiler development, internals, and research using online resources and textbooks from my school library.

**ARENA AI Safety Research Program**
*Student Researcher* December 2023 – January 2023
Researcher accelerator program working on mechanistic interpretability and reinforcement learning.
- Implementation of Automated Circuit Discovery on GPT2 comparing learned subgraphs to features learned through sparse autoencoding.
- Worked through a curriculum covering many paper replications in mechanistic interpretability, reinforcement learning, and transformer training at scale.

## ACTIVITIES/LEADERSHIP

**Freshman Leadership Organization** College Station, TX
*Freshman Reaching Excellence in Engineering* 2023 – 2024

## SKILLS & INTERESTS

**Technical Skills:** Advanced knowledge of C, C++, Python, Lisp as well as libraries like NumPy, PyTorch, OpenGL, CUDA, etc. Fluent in Haskell, OCaml.
**Activities:** Open source contributions, Hackathons.
**Interests:** Compilers, deep learning, transformers, signal processing, real-time graphics.