

Andrew Keil

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Education

University of Michigan Ann Arbor

Bachelors of Science in Engineering in Computer Engineering

Expected April 2025

GPA 4.0/4.0

Courses taken/in progress: Digital Integrated Circuits, Data Structures and Algorithms,
Computer Organization, Signals and Systems, Logic Design, Probabilistic Methods

Leadership Experience

Eagle Scout Project

Completed an Eagle Scout project as part of achieving my Eagle Scout rank.

The project involved leading a group of other scouts and some adults in building a sand and water table that I designed. The table was built for a local preschool/daycare center.

Projects

Connect 4 Solver

Program in C++ capable of being given any valid position in the game Connect 4 and determine if it is winning, losing, or a draw for the current player with optimal play.

- Uses Alpha-Beta pruning with best-first move ordering to significantly trim the search tree.
- Uses a transposition table to quickly look up positions that have already been searched and avoid extra work.

Pipelined Processor Simulator

Simulator of a pipelined 16-bit processor written in C.

- Simulator uses data forwarding to resolve data hazards.
- Uses predict not taken to speculate on branches and squashed incorrect predictions to resolve control hazards.

Skills

Experienced with: C/C++, Java, Autodesk Inventor and AutoCAD, Matlab

Familiar with: C#, Python, Verilog HDL, LTspice, Cadence Virtuoso